

THE DIVINE FLAME

by the same author

THE OPEN SEA
THE LIVING STREAM

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THE DIVINE FLAME

AN ESSAY
TOWARDS A NATURAL HISTORY OF
RELIGION

by
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PREFACE

This second series of Gifford Lectures was delivered in the University of Aberdeen in April and May, 1965. Once again I thank the Principal and his colleagues for all their kindness to my wife and myself which made our stay such a very happy one; and I especially thank Professor V. C. Wynne-Edwards for allowing me again to give the lectures in his Department of Natural History where I used myself to teach when I held the Regius Chair before him.

As before, I found the informal seminars I held a help in clarifying the expression of my ideas and I thank both those who took part in the discussions and Dr. Michael Begg who again acted as chairman. The lectures are published in the same general form in which they were delivered but each has been somewhat expanded to give a slightly fuller treatment or to add some further quotations to illustrate the theme. As my study of religion is that of a naturalist, I have, in providing examples of the many different elements involved, made more quotations in this series of lectures than in the last; there is therefore a special section of acknowledgements at the end of the book (p. 249).

LECTURE I

INTRODUCTION

In my first series of Gifford Lectures, now published as *The Living Stream*, I was speaking as a biologist and was largely concerned with showing how, in my view, religious experience fits into the background of our knowledge of the evolution of life. Whatever its explanation I regarded such experience as an essential part of man's natural history. I also answered "no" to the question: has modern biology destroyed the basis of a natural religion?

I want to make it quite clear that I am *not* saying that science at present is supporting the idea that religious experience is a transcendental reality; I am saying that science has produced no valid evidence against such a concept being true. The greater part of my former course was devoted to a re-examination of organic evolution which led me to maintain that the modern Darwinian position does not, as so often thought, point only to a materialistic interpretation of the process. The sub-title of the book was *A restatement of evolution theory in relation to the spirit of man*; I explained that by "the spirit of man" I meant that side of him which experiences spiritual and religious feelings and(or) loves adventure, natural beauty and the arts. This element in man I believe to be linked in evolution with the behavioural side of animal life.

When I denied that biology had destroyed the basis of a theistic religion, I was not speaking of any particular sectarian view of the nature of Divinity. I had explained that by theism I did not mean a belief in a deity with an anthropomorphic image, but did at least mean a belief in an "extra-sensory" contact with a Power which is *greater than, and in part lies beyond, the individual self*. Towards this, whatever it may be, we have a feeling, no doubt for good biological, or psychological, reasons (linked with the emotions of an early child-parent affection, but none the worse for that) of a *personal* relationship, and we can call it God. After saying that my second series of lectures would deal with

our evidence as to the nature of this experience, I hinted that I was "not led to conclude that the Freudian super-ego gives us the complete explanation." I fear I appeared to be prejudging the issue. I had merely wanted to let the reader of the first volume know that the possibility of Freud having entirely solved the problem had not escaped me, although I did not think it likely. This and other concepts are what we must here look at with minds as open as we can make them. I have previously stressed how difficult it is not to be prejudiced even in the field of science; we are in much greater danger of this when considering religion.

In the last lecture of that first series I said that during this second course, which I am now beginning, I should, in addition, *as a naturalist*, look at religious phenomena to see, from such a systematic study, if there was a reasonable hope of eventually constructing a natural theology based upon a more scientific foundation than hitherto. I do *not* for a moment imagine that I shall myself build such a framework; but in all humility I hope, as far as ten lectures will allow, to survey in very general terms the main ground upon which, I believe, such a science will eventually be erected. My attempt can be no more than a sketch.

Let me before going any further, remind you again of Lord Gifford's intentions in founding these lectureships; he made his great benefaction specifically for "promoting, advancing, teaching and diffusing the study of Natural Theology in the widest sense of that term." In his will he said:

I wish the lecturers to treat their subject as a strictly natural science, the greatest of all possible sciences, indeed, in one sense, the only science, that of Infinite Being, without reference to or reliance upon any supposed special, exceptional or so-called miraculous revelation. I wish it considered just as astronomy or chemistry is . . . The lecturers shall be under no restraint whatever in their treatment of their theme; for example, they may freely discuss (and it may be well to do so) all questions about man's conceptions of God or the Infinite, their origin, nature, and truth, whether he can have any such conceptions, whether God is under any or what limitations, and so on, as I am persuaded that nothing but good can result from free discussion.

I will also repeat here a definition of the term Natural Theology

as I understand it; it is that given by the late Dr. F. R. Tennant¹. After saying that the term has usually been a synonym for "rational theology", as for example the so-called "natural theology" of the English Deists, he makes an important distinction between the two. He would call the theology of the English Deists "rational" rather than "natural" for it "consisted of doctrines supposed to have been discerned by human reason, its first principles being self-evident and its secondary doctrine being deduced from them, in accordance with the *a priori* principle, that so and so is because it must be". In contrast to this there is, as he says, "a theology derivable empirically from the study of Nature, man and human history, and consequently not 'rational' and *a priori*, for which the title 'natural' is the most appropriate." It is in this sense that I use the term; and it was, I believe, in this way too that Lord Gifford understood it.

Theologians may well look askance at a scientist who attempts to lecture on theology, albeit natural theology. Let me say at once that it is not my aim to discourse upon the validity of the refinements of various theological doctrines or discuss the subtle distinctions between them; that indeed I am not competent to do. I am concerned with what to me are more fundamental issues: firstly the demonstration that the very idea of a natural theology is reasonable and can be brought into relation with science as we now understand it and secondly that such a theology itself can eventually become a branch of science as much as psychology is. It is because I have a profound conviction that Lord Gifford was right both in seeking to promote and spread the study of natural theology, and in demanding that it should be treated as a science—as much a science as is astronomy and chemistry—that I venture as a scientist to tread upon this hallowed ground.

The science of natural theology, that Lord Gifford called for nearly 80 years ago, has not yet arrived. No one to my knowledge has yet produced even an outline of such a comprehensive, scientific treatment of the subject as a whole in its many different aspects. If we are to have such a science, then I would plead that there may be some excuse for a tentative suggestion as to how it might develop being made by a scientist rather than by a philosopher. The philosophers may criticize it later. With all diffidence I am now attempting such an outline. I do not expect it to have any permanence; if, however, it serves as a starting point for discussion, or merely arouses

¹In his article on Theology in the fourteenth edition of *The Encyclopædia Britannica*.

some interest in the possibility of such a science, I shall feel the venture to have been well worth while. Diffidence may be the wrong word, for I feel impelled to make the attempt; I use it to express my awareness of my limited equipment for the task. That there are gaps in my reading will be obvious to those who are specialists in the different fields, but perhaps this is excusable, if not inevitable, in so wide a realm which includes the necessary biological background.

If there is one thing I am certain of, it is the need for a scientific approach to the subject. We are moving, the whole of civilization is moving with increasing speed, into the scientific age. We have a measure of this acceleration when we compare government expenditure on scientific research at different intervals of time. In one of my last lectures I drew attention to the figures given in the recent Trend Report of the amount spent by our own Government on civil research, *i.e.* apart from military and defence research: it rose from nine million pounds in 1945 to just over 151 million in 1963. In all countries the movement is the same. Not only is there an increase in research but a greater emphasis on scientific and technical education. In twenty years' time or less the majority of the educated population of the world will be thinking with a scientific outlook. Science cannot make a religion, nor can it generate religious feeling, for religion is emotional or subjective; and theology is not religion, but it *should* embrace a systematic knowledge and theory of religion. If those with the scientific way of thought come to ponder upon the validity of theology and find it an unscientific structure, then they are likely to draw the conclusion, a wrong conclusion I believe, that religion itself is a myth. Our civilization has been built upon a spiritual interpretation of the world; if the majority of the population come to have a materialistic outlook the whole nature of our way of life may change and not I think for the better.

A little time ago I was looking at the English translation of one of the early volumes by the eminent German theologian Dr. Rudolf Otto entitled *Naturalism and Religion*; it was translated by J. Arthur Thomson (who for so long held the Regius Chair of Natural History at Aberdeen) and was published in 1907. I shall be saying more about this book later, but here I want to quote from the preface to this English edition by the Rev. W. D. Morrison. He writes:

It is a remarkable and in some respects a disquieting fact that whilst rival ecclesiastical parties are engaged in a furious and embittered debate as to the precise shade of religious instruction

to be given in public elementary schools, the thinking classes in modern Europe are becoming more and more stirred by the really vital question whether there is room in the educated mind for a religious conception of the world at all. The slow silent uninterrupted advance of research of all kinds into nature, life, and history, has imperceptibly but irrevocably, revolutionised our traditional outlook upon the world, and one of the supreme questions before the contemporary mind is the probable issue of the great struggle now taking place between the religious and the non-religious conception of human life and destiny. When we look at the development of this great fundamental conflict we feel that disputes between rival ecclesiastical systems are of trifling moment; the real task at the present time before every form of religion is the task of vindicating itself before a hostile view of life and things.

It is the consciousness of this fact which has led to the translation and publication in English of Professor Otto's volume.

That was written 60 years ago. The position today is one still more opposed to religion. Some people may still cling to religious feelings but find any theology or formal statement of religion uncongenial. Let me quote now the opening two paragraphs from the Presidential Address delivered by the late Lord Samuel to the Royal Institute of Philosophy in October, 1948:

We hear everywhere of the decline of religion. So high an authority as the Archbishop of York, Dr. Garbett, has recently written, "The dominating fact of the religious position in England today is that the majority of our fellow-countrymen have little contact either with the Church of England or any other Church. The people," he says, "have deep religious instincts; but the evidence is overwhelming that the ordinary Englishman, drawn from any class of society, is ignorant of the nature of Christianity, and, except for rare occasions of ceremony regards the Church with indifference, or even with dislike as something which is irrelevant to his life." In many countries a large proportion of the population, in some of them the great majority, stand aloof from religious institutions and observances.

All through the ages religion has been the principal source of the moral law and its mainstay, an incentive to noble minds, a guide to the peoples. The lives and teachings of the founders of

Faiths, the prophets and sages, saints and martyrs, have bequeathed to mankind a precious heritage, exalted continually by poetry, music and all the arts. Imagine it gone: suppose the extreme case—the cathedrals deserted and fallen into ruin, like the mediaeval castles; the churches and synagogues, mosques and temples turned to other uses; their ministers dismissed, their zealous laity disbanded: suppose that heritage of centuries all dissipated and lost—how much the poorer would be the spirit of man.

Lord Elton was saying very much the same thing in a broadcast talk a few years ago. "We are," he said¹, "for the present living on our spiritual capital."

Today, for a growing proportion of the population, the idea of a spiritual side of the universe distinct from the material is regarded as a pleasant illusion, as a myth remaining from a pre-scientific age which civilization must now grow out of. This may seem to be the view of the new humanism, so different from that of the Renaissance humanists. It has its expression in the voice of my old friend—he was my tutor, and what an exciting one, when I was an undergraduate at Oxford—Sir Julian Huxley:

The knowledge explosion [he writes] of the last hundred years since Darwin is giving us a new vision of our human destiny—of the world of man, and of man's place and rôle in the world. It is an evolutionary and monistic vision, showing us all reality as a self-transforming process. It is a monistic vision, showing us all reality as a unitary and continuous process, with no dualistic split between soul and body, between matter and mind, between life and not-life, no cleavage between natural and supernatural; it reveals that all phenomena, from worms to women, from radiation to religion, are natural.²

I readily grant that all phenomena, including religion, may be called *natural*, but I do not believe that we can be certain, or indeed that it is even likely, that matter and mind are of the same order of nature. Now actually Sir Julian is not so dogmatically a monist as he appears to be from the above quotation; in another essay, "The Humanist Frame"³, he writes that "Science has removed the obscuring veil of

¹*The Listener*, Jan. 4th, 1951.

²*Education and the Humanist Revolution*. The ninth Fawley Foundation Lecture delivered in the University of Southampton, 1962.

³In *The Essays of a Humanist*.

mystery from many phenomena . . . but it confronts us with a basic and universal mystery—the mystery of existence in general, and of the existence of mind in particular.” Yet in this same essay, after writing most movingly of the importance for humanity of religion and religious experience, he says “Religion today is imprisoned in a theistic frame of ideas, compelled to operate in the unrealities of a dualistic world.”

Being puzzled, I have enquired as to the meaning he attaches to the terms monism and dualism and he has replied in a letter which he kindly allows me to quote. “As to my position” he writes, “I have always been very careful to point out that I am *not* a materialist, but a monist, in the sense that I believe that we and the rest of life are products of—and agents in—a single process. But the products have two aspects—material when observed from outside, subjective when viewed from inside. Of course this is a simplification—there is the Unconscious and the Subconscious; and there is the growth of neurological knowledge which makes it probable that self-reinforcing circuits are at work in the brain. I think I am right in saying that there is still a great deal of mystery about the relation between the two aspects: but we are getting to know more all the time.”

This indeed is the mystery I am concerned with. What is it that both perceives the material world and at the same time subjectively knows of its own existence? Clearly it is closely linked with the physical system and I agree, of course, that in the living evolutionary stream this element combines with the matter-energy complex to form a single process. Is it, however, one with the physical system, or is it, though linked, of such a different nature that we can more reasonably regard the world of our conscious perception as a dualistic one? To assert that either the one or the other is now an established fact, without considering all the evidence from the natural history of the spiritual side of man, would be, I believe, sheer dogma.

So many intellectuals now regard dualism with contempt, as a superstition. This, I maintain, instead of being based upon a truly rational argument, is largely a biased reaction against what is rightly seen to be a fantastic philosophy developed by the mediaeval mind. For so many minds of today the concept of energy has supplanted that of a Deity. This change in outlook is beautifully put into words by the late Sir Charles Sherrington in his Gifford Lectures *Man on his Nature* as follows:

The width of applicability of this concept “energy” bears witness to its analytic depth. It unites all sensible structure and brings it

into a form of doing. By it the atom, the rose we cultivate, and the dog our companion, are alike describable. Within the descriptive competence of this unification comes our whole perceptible world, what it is and what it does. The sailing cloud, the bird below it, the setting sun, the coast and sea, the ship and harbour, the lighted window, the flock and the grass down, the voice of the shepherd, it unites these all into one consistent existence whose identical underlying nature becomes through it in so far intelligible to us. Their seemingly endless variety gains thus for man the interest of a concerted system, and, making the interest more poignant, himself is one with them. . . .

The scheme arrived at now by Science is the fruit of patient toil, sifting out facts and in search of more facts, and exercising, it has been said, "remorseless logic". It has no tilt against religion as such. It knows its own field to be vast, but also knows it limited.

The anthropocentric outlook of mediaeval Christendom never welded its world into a unity so coherent as is this. . . . The mediaeval world did indeed succeed in unifying its manifold. But it went outside them to unify them. It unified them by appeal to theology; they were all the creation of the one Great Artificer. The energy-concept of today unifies its manifold in a way radically other than that. It unifies all the things of its manifold without going outside them.

Sherrington shows us this great unifying concept of energy—*yet he is really a dualist*; he, as we shall see (p. 224), believed that matter and energy on the one hand, and mind on the other, are distinct categories. "Chemistry and physics," he wrote, "explaining so much, cannot undertake to explain mind itself".

Orthodox theology of today still embraces much of the mediaeval dream against which the scientific outlook justly revolts; that is why I believe an attempt towards a more scientific natural theology is so urgent. Perhaps the most important issue for civilization today is that of dualism versus monism; are so many people in the world today right in regarding the doctrine of monism as the more reasonable of the two?

The idea of monism has grown with the development of science; it threatens to dominate the world. It is only in the last three hundred and fifty years that the outlook of western man has changed; from

the collapse of the culture of ancient Greece up to the beginning of the seventeenth century he was comfortable in a sure faith in the spiritual nature of the universe. Religion and philosophy were then firmly united. It is well to look back to three hundred years ago; the change was just beginning. In 1665 Galileo had been dead for only 23 years and Descartes for only 14, and Newton was still a young man; the Royal Society had been founded just three years ago. The observations of Galileo and his followers began to contradict many of the current theological ideas. Man began to need a more adequate philosophy; this need was met, of course, by the teachings of Descartes, who believed in an almost independent physical universe and an almost independent spiritual one: the two making contact with one another only through a point in the brain of man. The living body was an elaborate piece of mechanism and animals differed from man only in that they were without consciousness.

Philosophy now became divided. One branch led towards materialism which came to regard human behaviour as well as animal behaviour as a purely physical action and to look upon consciousness in the brain of man as a mere "epiphenomenon"—a kind of by-product which reflects but does not influence behaviour. Another branch led in the opposite direction towards philosophical idealism.

Since the time of Descartes physical science has, until quite recently, fitted in with materialism; it has, however, been the trend of ideas in biology which has had the more powerful influence in encouraging the materialistic outlook. After the time of Descartes, biologists became divided into those who were mechanists, believing the organism to be simply a physico-chemical machine and those who were vitalists, believing that in the animal there was some non-material element—some vital principle at work. At first biology was mainly descriptive. Animals and plants were classified; their life, habits, and distribution were recorded in natural history; anatomy and development were revealed in greater and greater detail as the microscope became more powerful and efficient. Physiology, the study of the working of the animal body, was at first also mainly presented in descriptive terms. Then as biology became a more exact science by the application of the experimental method, such actions of the body which had been thought by the vitalists to be dependent upon some separate life principle, were shown more and more to be governed by physical and chemical causes. By the middle of last century vitalism in biology was as good as dead.

Then came the publication of Darwin's *Origin of Species* in 1859 and before long the majority of the thinking world accepted the doctrine that the different kinds of plants and animals, including man, were not separately created, but evolved or modified in the course of time from earlier forms. There was now no line to be drawn between man and animals; and far back at the other end of the process it seemed likely that no line could be drawn between the simplest form of life and some very complex chemical system. The ruthless automatic mechanism of an entirely environmental natural selection which appeared to govern evolution, together with the fact that man was clearly evolved from the lower animals, seemed to show science deciding in favour of materialism.

For three hundred years the doctrine of monism has been gathering force. Could it be possible that modern humanistic man, excited by the success and neatness of the scientific method, and exalted by a sense of liberation from the intellectual absurdities of mediaeval thought, has been carried away into a new realm of intellectual folly quite different but only a little less absurd than that which preceded it? Could he be making a gigantic mistake? In historical perspective man has only comparatively recently escaped from an appalling mental nightmare—a phantasy held as gospel truth by nearly all the leading minds of Europe. Is it not just possible that many of the leading minds of today may now be swinging to an opposite extreme? Lord Samuel, in the lecture I have already quoted, gives us this vivid picture of the past:

Mediaeval Christian theology based itself on the myth of Adam and his Fall; adding a realistic after-world of human souls without bodies but with bodily sensations, a personal Devil and a localized Hell. Accepted not as symbolism but literally, this was pictured in the churches and preached from the pulpits. It was the cosmos of Dante, Milton and Michelangelo.

I shall horrify my colleagues if I revive the hoary Shavian jest that science has become the superstition of the twentieth century; yet, with an important difference, I take it seriously. It is not, of course, science itself that constitutes the superstition, but the dogmatism that many of its exponents have added to it. I passionately believe in the validity of science and the scientific method, but just as strongly do I deplore the false assertions that *science* finds the mystery of the mind-body relationship to be unreal and has classed consciousness as an irrelevant illusion. Such dogmatic materialism could lead in the future

to a world even more horrific than that created by the mediaeval mind, a future such as Aldous Huxley warned us of; or it could lead to our complete destruction, a possibility that was not even on the horizon when he wrote the *Brave New World*.

If civilization as we know it does continue, I cannot help feeling that those in a more enlightened age in the future will look back at the belief in a monism of matter and energy which is held by so many academic minds today and see it as a piece of naïvety that will both amuse and amaze them. There may well be a higher philosophical monism which we do not yet understand, but that would be radically different from that of the materialists of today.

Why is consciousness, which is the seat of all our values, ignored in the equation of life? How can the concept of perception be held without a recognition of the essential dualism of perceiver and perceived? Why is the body-mind relationship consistently ignored? Why, until quite recently, has it been almost taboo in scientific circles to talk of extra-sensory perception? I do not think that *science* itself has been "leading us up the garden path", if I may use such a colloquialism, but I do believe that we may have been misled by those who are so biased as to be blind to what eventually will be seen to be obvious. "Scientists," as Sir Peter Medawar reminded us in his Reith Lectures on *The Future of Man*, "tend not to ask themselves questions until they can see the rudiments of an answer in their minds. Embarrassing questions tend to remain unasked or, if asked, to be answered rudely." My brief review of the history of evolutionary thought in the last series of lectures was in part intended to show how again and again many of our leading scientists could be mistaken and how easily they could fail to see important truths.

Sir Julian Huxley, in the lecture which I quoted a few pages back, goes on, after extolling the "monistic vision", to say in the next paragraph:

It will inevitably lead to a new general organization of thought and belief, and to the development, after centuries of ideological fragmentation, of a new and comprehensive idea-system. The Middle Ages had a comprehensive vision and a comprehensive idea-system, and so does Marxist Communism today; but neither was founded on comprehensive knowledge. Today is the first period in history when man has begun to have a comprehensive knowledge of stars and atoms, of chemical molecules and geological strata, of plants and animals, of physiology and

psychology, of human origins and human history. The knowledge is highly incomplete; new and surprising discoveries are being made every year and will continue to be made for centuries to come. But it is comprehensive, in the sense of covering every field, every aspect of reality.

Its upshot is clear. Man is not merely the latest dominant type produced by evolution, but its sole active agent on earth. His destiny is to be responsible for the whole future of the evolutionary process on this planet. Whatever he does, he will affect that process. His duty is to try to understand it and the mechanisms of its working, and at the same time direct and steer it in the right direction and along the best possible course.

This is the gist and core of Evolutionary Humanism, the new organization of ideas and potential action now emerging from the Humanist Revolution of thought, and destined, I prophesy with confidence, to become the dominant idea-system of the next and critical phase of psycho-social evolution.

Against the word reality, at the end of the first paragraph quoted above, Huxley has an asterisk which refers to the following footnote:

I should except the field of so-called parapsychology. If the existence of telepathy, ESP, and the rest is firmly established, their scientific investigation could well lead to a revolution in our thinking about the nature of mind. But this is still quite hypothetical, and meanwhile it is our obvious duty to work out the implications of the very comprehensive knowledge we already possess.

I think he is wise to add that qualification, for this new field¹ is likely, I believe, to break this monistic vision.

My sympathies are certainly with Sir Julian in looking forward to a future comprehensive system of knowledge; for me, however, such a system cannot be all embracing if it is based solely upon the interactions of matter and energy as we now know them. The new scientific natural theology, which I envisage growing out of a more extensive natural history of human experience, must come to form an important element in this future new organization of ideas, *if it can do so before it is too late*.

We require, I believe, a closer fusion of the fields of vision of the two Huxleys, Sir Julian and Aldous. It would indeed be difficult to

¹I shall be referring again to psychical research in lecture viii.

place the works of Aldous Huxley in order of their importance, but certainly not least is his series of essays on religion which forms the brilliant matrix embedding his anthology: *The Perennial Philosophy*. He begins his introduction to the volume thus:

PHILOSOPHIA PERENNIS—the phrase was coined by Leibniz; but the thing—the metaphysic that recognizes a divine Reality substantial to the world of things and lives and minds; the psychology that finds in the soul something similar to, or even identical with, divine Reality; the ethic that places man's final end in the knowledge of the immanent and transcendent Ground of all being—the thing is immemorial and universal. Rudiments of the Perennial Philosophy may be found among the traditionary lore of primitive peoples in every region of the world, and in its fully developed forms it has a place in every one of the higher religions. A version of this Highest Common Factor in all preceding and subsequent theologies was first committed to writing more than twenty-five centuries ago, and since that time the inexhaustible theme has been treated again and again, from the standpoint of every religious tradition and in all the principal languages of Asia and Europe.

This study, like William James's *The Varieties of Religious Experience*, is, of course, one of the important pioneer contributions to the natural history of religion that I speak of. What he and Leibniz name as the perennial philosophy is the acknowledgment of the validity of that which I am calling the divine flame; "it is a metaphysic," as Aldous Huxley says "that recognises a divine Reality."

Aldous Huxley did not have the same confidence in the future as does his brother Julian. We see this from several contributors to the recently published memorial volume edited by Sir Julian. I will quote two of them. Dr. Robert M. Hutchins writes:

He saw around us, as he wrote me once, "the immense organized insanity in which we must all live and move and have our being". *Brave New World* was always on his mind. So he wrote me that a study published by the Centre for the Study of Democratic Institutions on automation and cybernetics had "a sickeningly *Brave New Worldish* flavour". He found a certain melancholy satisfaction, such as Cassandra must have felt when her prophecies came true, in the work of Jacques Ellul, *La Technique*, which suggests that we are living in the Brave New World already.

And again Professor Harrison Brown recalls that in 1958 Aldous Huxley wrote:

In 1931, when *Brave New World* was being written, I was convinced that there was still plenty of time . . . these things were coming all right, but not in my time, not even in the time of my grandchildren.

Then he adds,

The prophecies . . . are coming true much sooner than I thought they would. . . . The nightmare of total organization has emerged from the safe, remote future and is now awaiting us, just around the corner. Impersonal forces, over which we have almost no control, are pushing us towards that nightmare.

It is the danger that Aldous Huxley saw that makes the examination of the evidence for what he calls "a divine Reality" so urgent a task for today. Is this concept just a myth? Or is it indeed a reality that could be lost sight of—lost until it is seen again by the insight of a less "sophisticated" people, the survivors, perhaps a few Eskimos or Polynesians, who will multiply and rebuild a new civilization on the ruins of our own? The evidence for the rapid changes in our culture is everywhere at hand. As I revise this chapter I receive a letter inviting me to address an international conference with the aim of trying "to find some means of giving young people a positive outlook in the future." The letter goes on:

The solution of this problem appears to us to be urgent. The props of religion and social convention, which supported previous generations have crumbled. The shape of society is changing and will change with ever increasing speed all over the world. All those concerned with children and young people must face the challenge and try to find a solution.

Whilst Aldous Huxley was not confident in the future, he was not without hope. The *last* paragraph of the *last* article he ever wrote, that on Shakespeare and Religion, which he finished the day before he died, was this: "We are all on the way to an existential religion of mysticism. How many kinds of religion! How many kinds of Shakespeare!" And a few paragraphs before that we see a short sentence which vividly illuminates the nature of religion as he felt it: "Religion calls for opening up the self, the letting that which is more than the self flow through the organism and direct its activities."

Let us compare this statement with one by his brother and we shall see how different are the religions of the two Huxleys. Sir

Julian in the preface to his book *Religion without Revelation* writes:

. . . this question of God or no God, external Power or no external Power, non-human absolute values as against human evolving values—this question is fundamental . . .

Once we have rid ourselves of this doctrine of a Divine Power external to ourselves, we can get busy with the task of dealing with our inner forces.

Which of the two is right or nearer to the truth? Is it not as important for humanity to know the answer as it is to explore inter-stellar space? A more scientific natural theology should be able to provide us with the evidence to enable us to form a better judgement. It might even show the truth to lie somewhere between the two alternatives; that is if the Power "which is more than self" was like an evolving racial pool of spiritual wisdom open in some extra-sensory way to individual conscious minds or being shared in some common sub-conscious system on the Jungian pattern. I shall express my over-belief, as William James called it, or my faith if you like, in the last lecture when we have examined all the evidence; there will, however, be so much more evidence to be gathered in, as the new theological science develops in the future, that our over-beliefs are likely to be progressive ones.

Looking now at the other side of the picture; the decline in religion is, I believe, in no small measure due to theology ignoring the possible use of the scientific approach to its problems. If properly used the method could be invaluable in helping a scientifically minded public to realize that a faith in spirituality was not contrary to scientific fact. A natural theology, claiming itself to be as much a science as psychology, indeed linked with psychology, should be combating a materialistic view of the universe on both scientific and philosophical grounds, instead of taking just the passive apologetic rôle. This again will be part of the theme that I wish to put before you.

In one of my earlier lectures I recalled that my views regarding the importance of the part played by habit and behaviour in animal evolution were first put forward in the inaugural address I delivered in Aberdeen in the spring of 1942 on my taking up my appointment as Regius Professor of Natural History. I cannot resist also looking back to that same lecture to show that my present ideas as to how science may serve theology were also developing at that time; like those on evolution they have not been arrived at in any hurry, but have been much in my thoughts for more than twenty years. Let me quote

again from that early lecture, but a different part of it, and use it as an introduction to the theme of my present series, for it illustrates how I believe a natural theology may come to use the methods of science. I had already explained that ecology is a true branch of science: a *quantitative* study of the relations of organisms to their environment, both physical and animate. I then went on as follows:

Wherever man is concerned with animals in the wild, the development of ecology becomes a pressing economic necessity. As civilization advances there is hardly a corner of the earth that is not being harnessed to his needs, and hardly a corner of the earth that has not its wild life of sorts. The cultivated lands, as do the forests, teem with insect pests, and rodents are enemies of crops and stored grain. . . . Applied biology calls for more and more scientific natural history.

The line which separates applied from pure biology is fast being obliterated. It is frequently difficult to say to which category a piece of work belongs. . . .

Many of us must have felt, as we accept this and that Government grant for some particular piece of *ad hoc* research, that we are perhaps being dishonest—that our main interest in the problem before us is not the economic results that may ensue but the additions we hope to make to the subject as a whole. We need not, however, I think, have these misgivings, for I am sure that the best economic work is that which is undertaken in the spirit of adding to pure science. . . .

Perhaps I may make a confession. I have worked hard at marine ecology, but I have done so only partly because I have had a desire to benefit the fishing industry; I have this desire most sincerely, but also I have felt that I have been working towards a better understanding of animal relationships and making contributions to the development of general principles in ecology. . . .

I will go further—I will confess that perhaps my main interest in ecology is the conviction that this science of inter-relationships of animals and their environment will eventually have a reaction for the benefit of mankind quite apart from any immediate economic one. I believe that one of the great contributions of biology in this century, to the welfare of the race, will be the working out of ecological principles that can be applied to human affairs: the establishment of an ecological

outlook. I believe the only true science of politics is that of human ecology—a quantitative science which will take in not only the economic and nutritional needs of man, but one which will include his emotional side as well, including the recognition of his spiritual as well as his physical behaviour. The statistics of Mass Observation are a step in this direction. . . .

Ecology stands on its own feet as a true science dealing with animals as living wholes. Just as molecules, atoms and electrons are the units of physical science, so living animals can be the units, the behaviour of which we can deal with just as legitimately, by observation, experiment and statistical treatment to build a true science of life. A biology based upon an acceptance of the mechanist hypothesis is a marvellous extension of chemistry and physics, but to call it an entire science of life is a pretence. There is, of course, no doubt that the laws of physics and chemistry hold good within the animal body as outside it—as we take it to pieces in our analysis we find more and more remarkable mechanisms—more fascinating chemical interactions than we find outside it. No wonder that those who spend more time on analysis in the laboratory than in the study of living animals in nature are apt to come to the conclusion that in their physical and chemical discoveries they are explaining life. . . .

I cannot help feeling that much of man's unrest today is due to the widespread intellectual acceptance of this mechanistic superstition when the common sense of his intuition cries out that it is false. I believe that the dogmatic assertions of the mechanistic biologists, put forward with such confidence as if they were the voice of true science, when they are in reality the blind acceptance of an unproven hypothesis, are as damaging to the peace of mind of humanity as was the belief in everyday miracles in the middle ages. I believe what Professor Joad said the other day [that was in 1942] to be profoundly true: that the unconsciously frustrated desire for spiritual experience is no less important than the unconsciously frustrated sex upon which the psycho-analysts have laid so much stress.¹

¹I had forgotten that Aldous Huxley had said much the same thing in his *Proper Studies* (p. 213) in 1927: "Much of the restlessness and uncertainty so characteristic of our time is probably due to the chronic sense of unappeased desires from which men naturally religious, but condemned by circumstances to have no religion, are bound to suffer."

Yes—that was 1942—you will see that I have not changed.

For a long time many, perhaps most, philosophers and theologians have felt that, since science and religion are poles apart, the very idea of a scientific approach to theology is quite absurd. I agree that science has no more to do with the *essence* of religion than it has to do with the emotional appeal of art. Nevertheless a scientific theology, a natural theology in Lord Gifford's sense, could, I believe, by encouraging research and marshalling its facts in a systematic way, demonstrate to the scientifically thinking world that there is overwhelming evidence (1) to show that religious experience has played and can play an important part in human behaviour, (2) that there is a certain consistent pattern in the records of such experience and (3) that on so many occasions men and women have achieved, by what they call divine help or grace, that which they, and others who knew them, would have regarded as beyond their normal capabilities. Whilst perhaps not dealing with the ultimate nature of the extra-sensory feeling of the sacred, it could show that the existence and encouragement of such a feeling can be of paramount importance in the development of the finer human qualities.

Such a natural theology would not be unrelated to the science of sociology. Surely no one would argue that because science cannot deal with the poetry—the emotional qualities—of human love, sociology should not consider the impact of sex on society. Again a scientific theology, bringing in the assistance of psychology, would show how some of the hideous cruelties and superstitions of past religions, which have driven so many to abhor religion altogether, have really been the result of a mixing of abnormal deviations with religious practices. If a truly scientific theology comes—and it will not come at once, but only after perhaps another hundred years of research and the bringing together of a vast *natural history of religious experience*—then it would be a safeguard against such excesses in the future. I must not minimize the difficulties; seeing some of them I would urge that we should begin in earnest to work *now* towards such a natural theology of the future.

Let me say a further word about the analogy between religion and sex. I shall be returning to discuss the relationship between the two phenomena in a later lecture (p. 156). Here I just want to suggest that the linking of a natural theology to science need not seem such an outrageous one from a biological standpoint as it may appear to be at first sight to some of my academic colleagues. All will agree that a

great new step in organic evolution was taken with the appearance of sex which provides such an important mechanism for the production of genetical variation. The opposites in sex may be brought together by all manner of physical sensory means; from our own experience, however, the process is accompanied by an emotional ecstatic state we call love. Other forms of attraction have appeared in the living stream such as the mutual bonds between parent and offspring in the higher forms—again accompanied in our experience by a different but related form of affection. Now we have seen with the coming of man a new phase in evolution almost as striking as that of the appearance of sex: the new psycho-social phase, as Sir Julian Huxley calls it, in which the very mechanism of the process is altered by the development of a new non-genetic inheritance—the handing on of acquired knowledge and experience. Should we not, as biologists, entertain the possibility that the rapture of spiritual experience—the so-called love of God—may, after all, be a valid part of natural history, coming into existence in the living stream no less mysteriously than did sex; and that perhaps it may have only developed as religion when man's speech enabled him to compare and discuss his strange feeling of what Otto called the numinous. It might be, as already suggested, a psychological system linking individuals with some extra-sensory element—some shared reservoir of spiritual power, or it might be some much greater Reality. I am pleading that, recognising that we do not yet understand consciousness and the mind-body relationship, we should, as naturalists, examine both the phenomena of religious experience and of extra-sensory perception unhampered by dogmatic preconceptions.

After this let me repeat what I said in the last lecture of my first series. In suggesting that the power we call God may well have some fundamental link with the process of evolution, I hope I shall not be thought to be belittling the idea of God. I would rather appear to be saying that the living stream of evolution is as much divine as physical in nature; and that what I am calling the divine flame is an integral part of the creative evolutionary process which man, with his greater perceptive faculties, is now becoming aware of. It is something which, if he responds to it, provides him with a power over his difficulties that he might not otherwise have; it gives him a feeling of confidence and it generates courage in the face of adversity. I would suggest to biologists that since man is a part of the living stream we should not ignore his own experiences and behaviour as possibly throwing light on something fundamental in the nature of living things that might

not be apparent to us if we confined ourselves entirely to the objective examination of other species of animals. The study of man himself, in all his aspects, is indeed an important part of a comprehensive biology. We must, of course, beware of undue anthropomorphism in our interpretation of other animals; on the other hand we must not forget that we ourselves are the animals whose nature we should know best of all.

With this introduction I would like in what remains of this lecture to say a little more about the supposition, so often held, that there *must* be an opposition between science and theology. This contention is, I believe, erroneous, and is only argued by those who maintain it because either they have a false idea as to the content of science, or tend to make little distinction between religion and theology; some indeed appear to do both.

A consideration of the difference between religion and theology need not detain us as it is surely obvious. Religion, as I have already said, is essentially a matter of the spirit, belonging to the realm of emotion and feeling; and theology is *not* religion, but is the systematisation of the knowledge of religion and the theories put forward by the reasoning mind to explain it and the various kinds of belief. Let us then confine ourselves to the consideration of those who, I believe, have a false idea about the content of science. To illustrate this mistaken view I will quote from what I otherwise regard as a most illuminating book and one for which I have much admiration and sympathy; it is the book to which I have already briefly referred (on p. 12), an early work by Otto, translated into English with the title *Naturalism and Religion* (1907). By naturalism he means the scientific treatment of the world and rightly contrasts it with religion. But then, while he does not actually equate naturalism or science with materialism, he does imply that such naturalism or science can never give us any information other than about the material world. Many, I know, hold this view, but this is what I deny.

It is true, of course, that all the data of science must reach us by physical energy impinging upon our bodily sense organs, and this may sometimes do so only after passing through elaborate recording instruments or computing systems; nevertheless such data may *indirectly* provide us with evidence from which we may infer the existence of emotional states in other members of our community. By the prolonged study of human behaviour and the analysis of many personal records of such different emotional states we can begin to

formulate some systematic knowledge of the different forms of religious experience. Indeed psychology itself is just such a science of behaviour. Now let me quote Otto (from the translation, p. 6):

... everything depends and must depend upon vindicating the validity and freedom of the religious view of the world as contrasted with world-science in general; but we must not attempt to derive it directly from the latter. If religion is to live, it must be able to demonstrate—and it can be demonstrated—that its convictions in regard to the world and human existence are not contradicted from any other quarter, that they are possible and may be believed to be true. It can, perhaps, also be shown that a calm and unprejudiced study of nature, both physical and metaphysical reflection on things, will supplement the interpretations of religion, and will lend confirmation and corroboration to many of the articles of faith already assured to it.

With this I certainly agree; he goes on, however, as part of the same paragraph, to say:

But it would be quite erroneous to maintain that we must be able to read the religious conception of the world out of nature, and that it must be, in the first instance, derivable from nature, or that we can, not to say must, regard natural knowledge as the source and basis of the religious interpretation of the world. An apologetic based on such an idea as this would greatly overestimate its own strength, and not only venture too high a stake, but would damage the cause of religion and alter the whole position of the question. This mistake has often been made. The old practice of finding evidences of the existence of God had exactly this tendency. It was seriously believed that one could thereby do more than vindicate for religious conviction a right of way in the system of knowledge. It was seriously believed that knowledge of God could be gained from and read out of nature, the world, and earthly existence, and thus that the propositions of the religious view of the world could not only gain freedom and security, but could be fundamentally proved, and even directly inferred from Nature in the first instance.

He was, as he goes on to explain, largely thinking of the efforts that were made, as Paley did, to demonstrate the existence of God from the apparent design in Nature; these attempts, of course, failed when it was shown that all the wonderful adaptations which had seemed to imply a conscious designer, could be explained by the action

of natural selection. Whilst I agree that the existence of God and the reality of religion cannot be demonstrated by appeals to nature of this kind, I do most certainly hold that an empirical study of nature, man and human history can give us important evidence in support of a belief in a theistic universe. We must remember that Otto was writing at the beginning of the century before the development of those branches of biology which we call ecology and ethology (the study of animal behaviour). It was generally thought at that time that science could only deal with physical and chemical events, and some today still hold this view. As I have indicated, however, in the quotation I have given on p. 25 from my inaugural lecture of 1942, and as I discussed it a little more fully in the last lecture of my first series, the development of ecology and ethology as true branches of science has, I believe, forced us to alter this view.

The scientific method, that is quantitative study and experiment, *can* be applied to the behaviour of living animals, treating them as living wholes, just as it can be applied to the behaviour of electrons, atoms and molecules. I hope I have made it clear that I am not a vitalist in the old-fashioned sense: I do not deny that the whole of an animal's bodily physical actions will be accounted for in terms of the physical sciences whose laws of energy exchange are no more broken within the body than outside it. In some way, however, which science cannot yet explain, the factor of mind does have an influence on the behaviour of the body and does play an important part in the evolution of animal life. Because science cannot yet explain the mind-body relation, it does not prohibit us from using the scientific method to study animal behaviour just as legitimately as we use it for the study of the reactions of atoms and electrons although we may be equally in the dark on the real relationship of the corpuscular or wave interpretations of electrical energy. There is no logical reason why in sociology we should not apply the scientific method to the study of the ecology and behaviour of man just as we do for other animals; before, however, we can have a scientific study of man's religious experience which will help us to construct a more scientific natural theology, we must, as I stressed in the last lecture of the first series, first of all build up a most extensive *natural history* of religion. In the animal world the *science* of ecology only became possible after an immense collection of facts by the naturalists.

Am I not being over-optimistic in my forecasting such a science of natural theology, you may ask. In lecture iv I shall describe some of

the pioneer work in the building of this natural history of religion which will make it possible: particularly the early work of Starbuck in his *The Psychology of Religion* (1899) and of William James in his *Varieties of Religious Experience* (1902). In fact here we shall actually see science beginning to emerge from this natural history in the graphical treatment of data by Starbuck. Such statistical analyses have been carried much further in Michael Argyle's study *Religious Behaviour* (1958). I referred in my 1942 lecture, quoted on p. 25, to Mass Observation as the beginning of such an ecological study of religion; this system of survey inaugurated by Tom Harrisson gave us in 1947 the book *Puzzled People: a study in popular attitudes to religion, ethics, progress and politics in a London borough*. Recently, in 1961, we have had the remarkable book by Marghanita Laski, *Ecstasy: a Study of some Secular and Religious Experiences* which is an excellent example of the application of the ecological method to give a comparison of the records of the subjective feelings experienced by members of different groups of people; it is especially valuable in that the author approaches her subject from the secular and not the religious standpoint. I shall be discussing her methods and conclusions in lecture v (p. 128); and there I will also refer to Sir Cyril Burt's experimental studies in the psychology of value in which by carrying the scientific method into the field of philosophy he indeed shows us how it might be used in theology.

Let me now return to Otto's book; after referring to the failure of the attempt to infer the existence of God from the adaptations of Nature, he goes on:

And, above all, the main point was overlooked. For even if these "evidences" had succeeded better, if they had been as sufficient as they were insufficient, it is certain that religion and the religious conception of the world could never have arisen from them, but were in existence long before any such considerations had been taken into account.

Long before these were studied, religion had arisen from quite other sources. These sources lie deep in the human spirit, and have had a long history. To trace them back in detail is a special task belonging to the domain of religious psychology, history, and philosophy, and we cannot attempt it here, but must take it for granted.

The sources of religion certainly lie deep in the human spirit and have had a long history; did Otto, however, realize *how* long a history they must have had? While he appeared to accept the doctrine of

evolution—and a large part of his book is an examination of its theory as seen at the beginning of the century¹—did he, one wonders, grasp the immense period of time that animal evolution has been in progress before the coming of man? He talks later about the religious ideas of primitive man, but he does not consider how early in history, or prehistory, their formulation began. The empirical evidence of the reality of religion among primitive peoples provided by the scientific study of man—what I may call the *new* social anthropology—is indeed an important contribution to natural theology and I shall be devoting one of my lectures to it.

Otto goes on to discuss two kinds of Naturalism: one that he regards as the true naturalism which he equates with physical science and another which he says masquerades as naturalism but has a fringe of poetry and idealism: a conception “so indiarubber-like and Protean that it is as difficult as it is unsatisfactory to attempt to come to an understanding with it.” He rightly ignores the latter and concerns himself only with the former, the aims of which he defines as a striving after “consistent simplification and gradual reduction to lower and lower terms.” He now goes on to divide the world of knowledge into two great realms:

that of “Nature” and that of “Mind,” *i.e.* consciousness and the processes of consciousness. And two apparently fundamentally different branches of knowledge relate to these: the natural sciences, and the mental sciences. If a unified and “natural” explanation is really possible, the beginning and end of all this “reducing to simpler terms” must be to bridge over the gulf between these; but this, in the sense of naturalism, necessarily means that the mental sciences must in some way be reduced to terms of natural science, and that the phenomena, processes, sequences, and laws of consciousness must likewise be made “commensurable” with and be linked on to the apparently simpler and clearer knowledge of “Nature” and, if possible, be subordinated to its phenomena and laws, if not indeed derived from them. As it is impossible to regard consciousness itself as corporeal, or as a process of movement, naturalism must at least attempt to show that the phenomena of consciousness are attendant and consequent on corporeal phenomena, and that, though they themselves never become corporeal, they are strictly

¹All this, of course, is very out of date; his review of evolutionary ideas did not even include the rediscovery of Mendel’s laws.

regulated by the laws of the corporeal and physical, and can be calculated upon and studied in the same way.

But even the domain of the natural itself, as we know it, is by no means simple and capable of a unified interpretation. Nature, especially in the realm of organic life, the animal and plant world, appears to be filled with marvels of purposefulness, with riddles of development and differentiation, in short with all the mysteries of life.

You will see, I think, from these quotations and from what I have said earlier, how much I am in sympathy with Otto's point of view. In the last lecture of the other series I had declared how false it may be to push the principle of Occam's razor to the point of ignoring half of what is the real essence of life in the attempt to reduce living things to an explanation entirely in terms of present day physics and chemistry—the body, yes, but not the mind. Of course I think Otto is perfectly right in contrasting religion with *this* form of naturalism, *i.e.* one that he equates with physics and chemistry; I am taking his statement as a good example of what so many theologians appear to feel about science. It is also what so many scientists feel about science too! To my way of thinking such theologians and scientists are both wrong in regarding science in this light. A true science of living things should not ignore the existence of the mind-body relationship—nor should it equate "Nature" simply with physics and chemistry as we now understand them. A science freed from the unwarranted dogma of materialism is a science that can indeed serve theology. It may never explain the emotional qualities of religious experience any more than it will explain the joy to be found in art; it could, however, help in building a more comprehensive knowledge of the occurrence of this experience and its overwhelming importance for human society.

The invention and development of the scientific method is an important landmark in the evolutionary process; it is the logical outcome of the moulding of the intellect's means of dealing with the external world as revealed by the senses. We must now adapt the same method to serve the extra-sensory world of spiritual experience; although we know that *in itself* it cannot deal with the emotional side, we can certainly use it for a systematic study of the *external evidence* of the behaviour of men and women who appear to be moved by such experience.

LECTURE II

THE BIOLOGICAL BACKGROUND

Just as the last lecture of my first series, *The Living Stream*, was intended as a bridge between the two courses, so also will this lecture be another link connecting my present theme with the biological background; there is more I want to say about man's relation to the rest of the animal world than I was able to say at the end of the last series. Let me very briefly recapitulate the argument I there put forward to show that the process of evolution is not entirely the mechanistic one it is often thought to be.

I granted that the physical process was performed by the action of selection upon the almost infinite range of variation presented by the random mutations of genes and their recombinations—the changes in the DNA code—but I had more to say about the nature of the selecting agents. I hope I was successful in demonstrating that the selective act was not only carried out by the rigours of the physical environment or by the action of predators or rival competitors, but in an equally important manner by the development of new habits of life among the members of a population of the particular species in question. When any new habit became widespread in a population, then those members whose genetic make-up provided them with an improved bodily equipment for carrying out that new behaviour would tend to survive rather than those which were inferior in this respect. No doubt such bodily improvement would often include better nerve connections. It is true, of course, that changes in the environment, such as a shortage of normal food or the destruction of the usual breeding sites, may often dictate changes in behaviour, but not always; there is in addition the animal's restless, inquisitive exploratory nature which discovers new ways of life and is of paramount importance as a creative element in the living stream. Evolutionary progress is now seen to be due as much to the developing psychic life of the species as to the blind action of the environment. The evidence for this formed a large part of my

former thesis. Lamarck had been right after all in stressing the importance of habit in the working of evolution, although his proposed mechanism of the inherited effects of use and disuse of parts of the body to bring about evolutionary change had long been shown to be wrong. The influence of habit and behaviour is now seen to be effected through a somewhat subtle kind of Darwinian selection—a particular form of what was originally called organic selection by Lloyd Morgan and Baldwin at the turn of the century; for this I propose the term behavioural selection.

In the brief review I made of the evolution of the vertebrate animals we saw how short—how remarkably short—has been the period of Man's existence in relation to that long and ancient history; and we then realized that the stream of life must have been flowing on in time for hundreds of millions of years before even the vertebrate animals appeared. The brevity of man's evolution is even more surprising when we contemplate what has happened within this tiny fraction—perhaps no more than a thousandth—of the time living organisms have been upon the earth. We saw how man, by the development of his culture, has altered the very nature of the living stream itself; not only has he dominated the whole of the animal world but he has changed the method of his own evolution from a largely Darwinian to a largely Lamarckian one. By the development of speech, and with it reasoning powers, man has provided himself with a new form of inheritance; by the spoken, written and printed word, and by all manner of new methods of communication, he can pass on to later generations all the newly acquired knowledge and experience obtained in his lifetime. Life has passed into a new phase: one which differs as fundamentally from that of ordinary animal life as animals differ from plants. It is what Huxley has called the psycho-social phase of evolution—and it is mediated by what Waddington calls socio-genetic transmission.

In the brief historical sketch of the development of our modern evolution theory which I gave in my first series of lectures I referred on a number of occasions to the brilliant insight of Alfred Russel Wallace in seeing the correct solution to various problems ahead of other thinkers in this field. It was the same in regard to man; he came to realize the fundamental change that had taken place in the very nature of the evolutionary process well before others had grasped its full significance. He put forward his views in 1864 in a paper in the *Anthropological Review* (vol. 2. pp. clviii-clxx), a journal which soon

ceased to exist. I shall quote from it at some length because it is only to be found in a limited number of libraries and has been largely forgotten. We should remember that it was published only five years after Darwin's *Origin of Species* and seven years before Darwin's *The Descent of Man*; it bore the title "The Origin of Human Races and the Antiquity of Man Deduced from the Theory of Natural Selection."

Thus man, [he wrote] by the mere capacity of clothing himself, and making weapons and tools, has taken away from nature that power of changing the external form and structure which she exercises over all other animals. As the competing races by which they are surrounded, the climate, the vegetation, or the animals which serve them for food, are slowly changing, they must undergo a corresponding change in their structure, habits, and constitution, to keep them in harmony with the new conditions—to enable them to live and maintain their numbers. But man does this by means of his intellect alone; which enables him with an unchanged body still to keep in harmony with the changing universe.

From the time, therefore, when the social and sympathetic feelings came into active operation, and the intellectual and moral faculties became fairly developed, man would cease to be influenced by "natural selection" in his physical form and structure; as an animal he would remain almost stationary; the changes of the surrounding universe would cease to have upon him that powerful modifying effect which it exercises over other parts of the organic world. But from the moment that his body became stationary, his mind would become subject to those very influences from which his body had escaped; every slight variation in his mental and moral nature which should enable him better to guard against adverse circumstances, and combine for mutual comfort and protection, would be preserved and accumulated; the better and higher specimens of our race would therefore increase and spread, the lower and more brutal would give way and successively die out, and that rapid advancement of mental organization would occur, which has raised the very lowest races of man so far above the brutes, . . .

If the views I have here endeavoured to sustain have any foundation, they give us a new argument for placing man apart, as not only the head and culminating point of the grand series of organic nature, but as in some degree a new and distinct order

of being. From those infinitely remote ages, when the first rudiments of organic life appeared upon the earth, every plant and every animal has been subject to one great law of physical change. As the earth has gone through its grand cycles of geological, climatal and organic progress, every form of life has been subject to its irresistible action, and has been continually, but imperceptibly moulded into such new shapes as would preserve their harmony with the ever changing universe. No living thing could escape this law of its being; none could remain unchanged and live, amid the universal change around it.

At length, however, there came into existence a being in whom that subtle force we term *mind*, became of greater importance than his mere bodily structure. Though with a naked and unprotected body, *this* gave him clothing against the varying inclemencies of the seasons. Though unable to compete with the deer in swiftness, or with the wild bull in strength, *this* gave him weapons with which to capture or overcome both. Though less capable than most other animals of living on the herbs and the fruits that unaided nature supplies, this wonderful faculty taught him to govern and direct nature to his own benefit, and make her produce food for him when and where he pleased. From the moment when the first skin was used as a covering, when the first rude spear was formed to assist in the chase, the first seed sown or shoot planted, a grand revolution was effected in nature, a revolution which in all the previous ages of the earth's history had had no parallel, for a being had arisen who was no longer necessarily subject to change with the changing universe—a being who was in some degree superior to nature, inasmuch, as he knew how to control and regulate her action, and could keep himself in harmony with her, not by a change in body, but by an advance of mind.

Here, then, we see the true grandeur and dignity of man. On this view of his special attributes, we may admit that even those who claim for him a position as an order, a class, or a sub-kingdom by himself, have some reason on their side. He is, indeed, a being apart, since he is not influenced by the great laws which irresistibly modify all other organic beings. Nay more; this victory which he has gained for himself gives him a directing influence over other existences. Man has not only escaped "natural selection" himself, but he actually is able to take away

some of that power from nature which, before his appearance, she universally exercised. We can anticipate the time when the earth will produce only cultivated plants and domestic animals; when man's selection shall have supplanted "natural selection"; and when the ocean will be the only domain in which that power can be exerted, which for countless cycles of ages ruled supreme over all the earth.

Darwin was delighted with the paper and wrote on May 22, 1864 to Hooker:

I have now read Wallace's paper on Man, and think it *most* striking and original and forcible. I wish he had written Lyell's chapters on Man.¹ . . . I am not sure that I fully agree with his views about Man, but there is no doubt, in my opinion, on the remarkable genius shown by the paper. I agree, however, to the main new leading idea.

and on May 28th he wrote to Wallace:

. . . But now for your Man paper, about which I should like to write more than I can. The great leading idea is quite new to me—viz. that during late ages the mind will have been modified more than the body; yet I had got as far as to see with you, that the struggle between the races of man depended entirely on intellectual and moral qualities. The latter part of the paper I can designate only as grand and most eloquently done. . . . I am not sure that I go with you on all minor points: . . .

Wallace replied at length to Darwin's criticisms and clarified his views regarding the lesser points raised.

I shall now devote the greater part of this lecture to a discussion of some new ideas that have recently been put forward regarding man: firstly those of Professor Michael Polanyi, and secondly those of Professor C. H. Waddington expressed in his book *The Ethical Animal* (1960). Both, I believe, are important for our consideration of the foundations of a natural theology.

The ideas of Polanyi which I want here to discuss form only a part of his much larger theory of knowledge that he first put forward in his Gifford Lectures of 1951-2 and published later in his books *Personal Knowledge* (1958) and *The Study of Man* (1959). I very briefly referred to his views in the last of my first series of lectures; here I shall treat

¹See *Life and Letters*, III, pp. 11 *et seq.* for Darwin's disappointment over Lyell's treatment of the evolutionary question in his *Antiquity of Man*.

them a little more fully, for they demonstrate how much nearer we are to the animal kingdom than perhaps many, even confirmed evolutionists, may have realized.

Fundamental to his thesis is his demonstration that human knowledge is essentially of two kinds:

(1) that set out in written words, maps, mathematical formulae, etc.: such formulated knowledge he calls *explicit knowledge*.

(2) unformulated knowledge, for example the knowledge of what we are at this very moment in the act of doing, before we have expressed it to ourselves in words: this he calls *tacit knowledge*.

Let me now quote from the first of his Lindsay Memorial Lectures which he published in *The Study of Man*.

Tacit knowing appears to be a doing of our own, lacking the public, objective, character of explicit knowledge. It may appear therefore to lack the essential quality of knowledge.

This objection cannot be lightly overruled, but I believe it to be mistaken. I deny that any participation of the knower in the shaping of knowledge must invalidate knowledge, though I admit that it impairs its objectivity.

He goes on to show

. . . that tacit knowing is in fact the dominant principle of all knowledge, and that its rejection would, therefore, automatically involve the rejection of any knowledge whatever.

He sets out to demonstrate that the personal contribution, by which the knower shapes his own knowledge, predominates not only at the lowest levels of knowing, but also, as he says, "in the loftiest achievements of the human intelligence"; he then goes on to show that this tacit coefficient, as he calls it, though not so easily recognizable, plays a decisive rôle in "the intermediate zone forming the bulk of human knowledge."

The most primitive forms of human knowing, the forms of intelligence which man shares with the animals, are situated behind the barrier of language:

Animals have no speech, and all the towering superiority of man over the animals is due almost entirely to man's gift of speech. Babies and infants up to the age of eighteen months or so are mentally not much superior to chimpanzees of the same age; only when they start learning to speak do they rapidly out-distance and leave far behind their simian contemporaries. Even adults show no distinctly greater intelligence than animals

so long as their minds work unaided by language. In the absence of linguistic clues man sees things, hears things, feels things, moves about, explores his surroundings and gets to know his way about, very much as animals do. . . .

The essential *logical* difference between the two kinds of knowledge lies in the fact that we can critically reflect on something explicitly stated, in a way in which we cannot reflect on our tacit awareness of an experience.

Polanyi now illustrates this by comparing the tacit and explicit knowledge of the same operation. As he has said, man can look round and explore his surroundings tacitly just as animals can. He quotes Tolman, who has worked so much on the behaviour of rats in mazes, as saying that a rat gets to know its way about a maze as if it had acquired a mental map of it. He goes on to say that observations on human subjects suggest that a man, however intelligent, is no better at maze-running than a rat, unless assisted by notes, whether these are remembered verbally or sketched out in a drawing. Man, of course, can make such notes and the advantages of a map are obvious; in addition, however, a man has, with his explicit knowledge, the power of reflecting critically upon such a map, checking its validity with reality and seeing if perhaps at some point it may be inaccurate. If it is a map he has previously made himself, it is telling him something he has put down before; it is like the playing-back for criticism of something he said before. Nothing like this can take place at a pre-articulate level. If we have only a mental memory of a fairly familiar region and we then lose our way we can only correct our mistake by plunging from one view of a scene to another. Knowledge held in this inarticulate manner he calls *a-critical*. He then uses the map simile further to heighten the contrast between tacit and explicit knowledge. A proper map is drawn up by triangulation; it is built up according to strict rules from a set of observations collected in a systematic way and critical thought is all the time examining the process.

The contrast between the two domains [Polanyi says] should now be sharp enough. Pre-verbal knowledge appears as a small lighted area surrounded by immense darkneses, a small patch illuminated by accepting *a-critically* the unreasoned conclusions of our senses; while man's articulate knowledge represents a panorama of the whole universe, established under the control of critical reflection. . . .

And yet [he says a little later] this exalted valuation of

strictly formalized thought is self-contradictory. It is true that the traveller, equipped with a detailed map of a region across which he plans his itinerary, enjoys a striking intellectual superiority over the explorer who first enters a new region—yet the explorer's fumbling progress is a much finer achievement than the well-briefed traveller's journey. Even if we admitted that an exact knowledge of the universe is our supreme mental possession, it would still follow that man's most distinguished act of thought consists in *producing* such knowledge; the human mind is at its greatest when it brings hitherto uncharted domains under its control. Such operations renew the existing articulate framework. Hence they cannot be performed within this framework but have to rely (to this extent) on the kind of plunging reorientation which we share with the animals. Fundamental novelty can be discovered only by the same tacit powers which rats use in learning a maze.

Can we go further, asks Polanyi, and show that at all mental levels it is the *tacit* powers of the mind which are decisive? He believes we can. We see things in different ways and find our way about a new neighbourhood by our tacit powers organizing our experience so as to gain control over it. They make sense of it; one word covers this—"understanding".

He goes on to show that not only are the purely tacit operations of the mind processes of understanding, but the understanding of words and symbols is also a tacit process. As he says a little later "our whole articulate equipment turns out to be merely a tool-box, a supremely efficient instrument for deploying our inarticulate faculties." The tacit element, then, also predominates in the domain of explicit knowledge, and represents at all levels man's ultimate faculty for acquiring and holding knowledge.

When we understand something, or confront a statement with the facts to which it refers, we exercise our tacit powers in search of a better intellectual control of the matter in hand. We seek to clarify something said or experienced, and to move from one position which we feel to be uncertain to another we find more satisfying. "*And this*", he emphasizes, "*is how we eventually come to hold a piece of knowledge to be true.*" Or again he says "All human knowledge is now seen to be shaped and sustained by the inarticulate mental faculties which we share with the animals."

This last point is one I particularly want to stress. I cannot here

discuss the full development of Polanyi's theory of knowledge, and, indeed, I am not competent so to do; I must leave that to the philosophers. In more recent papers he has developed still further the philosophical implications of tacit knowing¹. I am only introducing his basic idea here because I regard it as so important for appreciating our relationship to the animal world; for this, in turn, I regard as fundamental in considering a theory of natural theology. Before leaving it, however, I must follow his argument just a step further in regard to relating tacit knowing to the act of understanding. The characteristics of understanding—the grasping of disjointed parts into a comprehensive whole—have been traced by gestalt psychology. We cannot comprehend a whole without seeing its parts, but we can see the parts without comprehending the whole.

These psychological observations [says Polanyi] can be transposed now into the elements of a theory of knowledge. We may say that when we comprehend a particular set of items as parts of a whole, the focus of our attention is shifted from the hitherto uncomprehended particulars to the understanding of their joint meaning. This shift of attention does not make us lose sight of the particulars, since one can see a whole only by seeing its parts, *but it changes altogether the manner in which we are aware of the particulars. We become aware of them now in terms of the whole on which we have fixed our attention. . . .*

To illustrate this, he says:

Take words, graphs, maps and symbols in general. They are never objects of our attention in themselves, but pointers towards the things they mean. If you shift your attention from the meaning of a symbol to the symbol as an object viewed in itself, you destroy its meaning. Repeat the word "table" twenty times over and it becomes a mere empty sound. Symbols can serve as instruments of meaning only by being known subsidiarily, while fixing our focal attention on their meaning. And this is true similarly of tools, machines, probes, optical instruments. Their meaning lies in their purpose; they are not tools, machines, etc., when observed as objects in themselves, but only when viewed subsidiarily by focusing attention on their purpose. The skilful use of a tennis racket can be paralysed by

¹"The Unaccountable Element in Science" in *Philosophy Today*, London, 1962, and "Tacit Knowing, its bearing on some problems of philosophy", *Review of Modern Physics*, vol. 34, pp. 239-62, 1962.

watching our racket instead of attending to the ball and the court in front of us.

This brings out an essential point. We use instruments as an extension of our hands and they may serve also as an extension of our senses. We assimilate them to our body by pouring ourselves into them. And we must realize then also that our own body has a special place in the universe: we never attend to our body as an object in itself. Our body is always in use as the basic instrument of our intellectual and practical control over our surroundings. Hence in all our waking hours we are subsidiarily aware of our body within our focal knowledge of our surroundings. And, of course, our body is more than a mere instrument. *To be aware of our body in terms of the things we know and do, is to feel alive. This awareness is an essential part of our existence as sensuous active persons.*

Here I would like to refer back to the main thesis of my first series of lectures which I have briefly mentioned at the beginning of this one. It is, I believe, the psychic or behavioural side of animal life which has, together with the environment, fashioned the form of the body from the material world by the continual selection within a population of those chance genetic varieties which give the better manifestation of its pattern of activity. The death of the body is an absolute necessity in a progressive evolution of better and better incarnations of a gradually changing behavioural element—the “spirit of life” if you like. The organs, the parts of the body, the hands and feet and so on, are all tools carved out of the physical world by the behavioural selection I have discussed. It is, I believe, the mental element in the universe that is the real operating factor in organic evolution; the constantly varying DNA code supplies the changing material for this selection to work on.

Before I leave Professor Polanyi's ideas to lead back to my main reason for introducing them—his demonstration, through his conceptions of tacit knowledge and understanding, of how close is man's relationship to the animal kingdom—I must give one more quotation to illustrate an important suggestion he makes that the tacit powers of animals may in fact be *greater* than our own.

It is of course impossible [he says] to compare exactly the level of tacit performances involved in the works of human genius, with the feats of animals or infants. But we may recall the case of Clever Hans, the horse whose powers of observation far exceeded

those of a whole array of scientific investigators. They believed the animal was solving problems set out on a blackboard in front of it, while it was actually taking its clues for correct answers by watching the involuntary gestures made by the scientists themselves in expectation of these answers. Remember also how readily and how well children learn to read and write, compared with hitherto illiterate adults. There is enough evidence here to suggest that the highest tacit powers of an adult may not exceed, and perhaps actually fall short of those of an animal or an infant, so that the adult's incomparably greater performances are to be ascribed predominantly to his superior cultural equipment. Genius seems to consist in the power of applying the originality of youth to the experience of maturity.

Now I would like to refer to one of Sir Peter Medawar's essays, "Tradition: the Evidence of Biology" in his *The Uniqueness of the Individual* (1957), for what he has to say here is very pertinent to my earlier quotation from Polanyi. He asks:

. . . in what fundamental biological way do human beings differ from other animals? One possible answer, which I shall try to justify, is this: man is unique among animals because of the tremendous weight that tradition has come to have in providing for the continuity, from generation to generation, of the properties to which he owes his biological fitness.

He goes on to discuss the tools and instruments used by man and points out that they are of two main kinds: those assisting or increasing our motor activities, such as hammers, cutlery, motor cars, megaphones and guns, which may be called motor instruments, and those amplifying our sense organs such as spectacles, ear-trumpets, radio sets and thermometers which we can call sensory instruments. He adopts the terms proposed by Lotka to distinguish the organic, bodily organs (eyes, ears, teeth, etc.) as *endosomatic* instruments, from all the accessory tools and devices manufactured to assist them, which are *exosomatic* instruments. He reminds us, as did Polanyi, that these exosomatic instruments are *functionally* parts of the body, although anatomically distinct: sensory instruments like microscopes and geiger counters only serve as such when linked to our sense organs, and motor instruments obviously only act as such when used. "It is not spectacles" he says "but spectacles worn and looked through that are instruments of vision, and the hammer is only a tool when wielded by the hand." He now continues:

The relationship between instrument and user may be very remote, as it is with guided missiles and with engines designed to work without attention, but their conduct is built into them by human design and in principle, their functional integration with the user is just the same. It is for this reason I deplore the habit of describing the brain as a kind of calculating machine; the truth is that a calculating machine is a kind of exosomatic brain. It performs brain-like functions, much as cameras have eye-like, and clothes have skin-like functions, and motor cars the functions endosomatically performed by legs. We may indeed learn something about the brain by studying calculating machines, as we have learned something about the eye by studying lenses; but it need not be so: the internal-combustion engine has no lessons to teach us about how muscles work. . . .

In passing let me say how much I agree with Medawar in deploring the habit of describing the brain as a kind of calculating machine. After making a comparison of the evolution of endosomatic and exosomatic organs he proceeds:

I now at last come to the point. There is one crucial distinction between endosomatic and exosomatic evolution. Ordinary evolution is mediated by the process of heredity. Exosomatic "evolution" is mediated not by heredity but by *tradition*, by which I mean the transfer of information through non-genetic channels from one generation to the next. So here is a fundamental distinction between the Springs of Action in mice and men. Mice have no traditions—or at most very few, and of a kind that would not interest you. Mice can be propagated from generation to generation, with no loss, or alteration, of their mouse-like ways, by individuals which have been isolated from their parental generation from the moment of their birth. But the entire structure of human society as we know it would be destroyed in a single generation if anything of the kind were to be done with man. Tradition is, in the narrowest technical sense, a biological instrument, by means of which human beings conserve, propagate and enlarge upon those properties to which they owe their present biological fitness, and their hope of becoming fitter still.

The fundamental difference between man and the other animals certainly lies in this new factor of tradition, in this development of speech leading to explicit knowledge and reasoning powers, and so

to the new cultural life which has changed the very nature of the evolutionary process. All this has been increasingly realized, and particularly stressed by Huxley and Waddington, in the last twenty-five years or so. The great importance of speech and culture was emphasized by E. Cassirer in his *An Essay on Man* (1944) and Waddington's 1946 articles on "Science, Ethics, Religion" in *World Review*.

The development of speech and the corresponding increase in the size of the brain of man has all happened, as we have seen from the fossil evidence available, in an extremely small fraction of time compared with the long history of animal evolution. The resulting explicit statements of knowledge and the culture to which they have given rise, while so important and so novel, can hardly have introduced some fundamentally different element that was not present in the universe before. Some biologists would seem to suggest that consciousness is confined to man, but this new explicit system, I would submit, cannot have produced the state of awareness. I agree, of course, that the complex human personality has indeed been built up in some such manner as the psychologists suggest, although the advocates of the different schools still differ very much amongst themselves as to the exact nature of the process. Personality, however, is not the same as consciousness. I shall be arguing later that some, at any rate, of the elements which go to make up religion—the sense of the sacred, the numinous and the feelings of being in contact with some power other than the self, are unlikely in themselves to be products of the explicit system, although only that system can give a verbal expression of them; they are, I believe, more likely to be part of a tacit, inarticulate, extra-sensory knowing which is linked with elements going much further back in biological history. Nevertheless the coming of speech and culture must have had a profound influence on the evolution of religion which could not be formulated before their appearance; here the bold ideas put forward by Professor Waddington in his *The Ethical Animal* deserve and must receive most careful consideration.

It is not my intention to come down with any finality on one side or the other of an argument as to whether Waddington's thesis is a valid one or not; I will, however, say at once that it does seem to me to be eminently reasonable. I can only present the merest outline of it, or just a part of it; but enough, I hope, to show that his ideas must indeed be taken seriously and examined from every point of view in building the foundations for our science of natural theology. He points out, as did Polanyi, that the human intellect, as a product of evolution,

has been moulded to cope with the external natural world; it is an instrument, he says, "forged for the specific purpose of coming to terms with things." And it is his thesis that any rational discussion and comparison of the different systems of ethics can only be carried on within a framework of animal and human evolution. He certainly realizes the theological significance of what he is saying:

Although the points I shall be making are certainly not without importance from a religious point of view, or viewed as factors in man's spiritual life, I shall not attempt to treat them in this manner, nor to venture into the field of inspirational writing of which Teilhard de Chardin and Huxley have provided us with such splendid examples.¹

I will come at once to what I believe is the most important point in relation to theology that Waddington is making. It is this. The new cultural system developed in man through the coming of speech, *i.e.* the passing on of acquired experience, which he calls the socio-genetic method of transmission, can only work successfully if there is developed, not only the means of offering the information to the new generation, but also if the *members of the new generation are made to receive it*. The new-born infant has, as he says, to be "moulded into an information acceptor", to be in fact made "ready to believe (in some general sense of the word) what it is told." The mechanism of information transfer cannot work successfully until the human being has been turned by evolution into someone who entertains beliefs, "who goes in for believing". We really want, as Waddington says, some special word for this; the development, by evolution, of the new-born infant into an authority acceptor. Once this has happened and the mechanism comes into operation "then the socio-genetic system carries out a function analogous to that by which the formation and union of gametes transmit genetic information . . ." Further the conversion of man into an entertainer of beliefs "involves the formation within his mind of some mental factors which carry authority, and that it is some aspects of these same authority-bearing systems that are responsible for his simultaneous moulding into an ethicizing creature."

If the thesis he is putting forward is true, and, as I have said, to me it seems most reasonable, then at the basis of our natural theology we have this important link with the evolutionary system: a building into the mind of man of a *capacity for belief*. Here many might be inclined to

¹In the first lecture of my former series I have discussed the essential difference between the views of Chardin and Huxley; the former is a theist and the latter not.

think that this surely cuts away another, perhaps the last remaining, support for religion; in the light, however, of other evidence, to be considered later, I do not believe this to be so at all. And from what Waddington himself writes I do not think that he would say that it destroys the spiritual side of religion. He writes:

In particular, I use the phrase "human revolution" to refer to all the cultural changes which differentiate human life at the present day from that of our Stone Age ancestors. It includes spiritual and intellectual changes as well as those concerning materials and tools.¹

He goes on to outline two main hypotheses to be developed: (1) that the function of ethical beliefs is to be a means of bringing about human evolution and (2) that evolution exhibits a recognizable direction of progress. I shall not be able here to discuss his second line at all but from what I have said in my last lecture and also in my first series, it will be seen that I am wholeheartedly in sympathy with him when he writes:

As soon as one places the problem of free will in juxtaposition with that of consciousness, it becomes apparent that it cannot be solved either by any manipulation of our existing physico-chemical concepts, since these include no hint of self-awareness, or by any analysis of the language used in formulating the situation, since no linguistic analysis can annul our experience of self. We need ideas which depart more radically from those of the physical sciences; something perhaps akin to the thought of philosophers such as Spinoza and Whitehead, who have suggested that even non-living entities should not be denied qualities related to the self-awareness and will, which we know, in much more highly evolved forms, in ourselves.²

There are certain aspects of thought in biology which he regards as more relevant to epistemology and general philosophy than anything physics can offer about the ultimate nature of matter: particularly those concerned with the facts of evolution and development. To the biologist, he says: "I think it is bound to remain almost inconceivable that one can talk much sense about the relation between man and the external world if one leaves out of account the fact that man has been brought into being by evolution in relation to the external world." He says this immediately after drawing attention to the fact that:

¹*The Ethical Animal*, p. 31.

²*loc. cit.*, p. 63.

Remarkably few professional philosophers of the present day so much as mention the fact that the human sensory and intellectual apparatus has been brought into being by an evolutionary process whose observed effects in all other instances are to produce operative systems conformable to the situations with which they will have to deal. Take two examples more or less at random: the word evolution does not occur in the index of either Gilbert Ryle's *The Concept of Mind* or A. J. Ayer's *The Problem of Knowledge*.¹

Waddington does not wish to imply that evolution has given man the perfect intellectual apparatus for dealing with the external world. It is clear, as he says, that not only do our sense organs offer many opportunities for improvement (as for example in response to electromagnetic vibrations) but that "there can be no reason to doubt that our conceptualizing and logical faculties might also be susceptible of betterment." He goes on to say:

Man is a part of nature, he forms a certain picture of what we may crudely call the external world, not as an outside observer of it but just because the forces of the external world have moulded his evolution into a being capable of reflecting it in a way adequate for carrying on the activities of life. We can, I think, be quite confident of this statement in relation to the physiological, sensory and intellectual capacities of man for handling his environment. Theologians might wish to reserve a small but crucial element in the human constitution outside the sphere of relevance of evolution. Such a thesis cannot be rejected out of hand, but it requires special arguments to support it. The great bulk of human nature, and the part that is most easy to observe, has undoubtedly been produced by evolution, and has been moulded by the necessity to interact reasonably successfully with the non-human components of the universe.

Such a point of view has of course many implications for questions of general epistemology. It implies, for instance, that we have a mind capable of grasping logical structures because the universe exhibits regularities which make logical thinking a useful activity. It has implications also for the theory of perception. It argues that we experience tables and chairs, and not only (if at all) mere sense data, because it is evolutionarily useful to perceive, as Whitehead put it (1928), in the mode of

¹*loc. cit.*, p. 74.

causal efficacy as well as in that of presentational immediacy.¹

Here he makes a point which has special relevance to our attempt at outlining a more scientific natural theology. "Theologians," he says, "might wish to reserve a small but crucial element in the human constitution outside the sphere of relevance of evolution." This is indeed an important point; its relevance, however, must depend upon one's view as to the nature of the evolution process. I am not prepared to agree, as you will have gathered from the case I have argued in my first series of lectures—and I don't think Waddington does—that all that is important in the evolutionary process is part of the physico-chemical system which is perceived by our sense organs. I have expressed my view that there are good grounds for believing that the "psychic" or mental side of animal life plays a vital part in the process by the means of behavioural selection and that our religious feelings are linked with this. It is a matter to which we shall be returning as our discussions proceed, particularly in lecture VII (p. 156).

I cannot in part of one lecture do more than pick out from Waddington's thesis some of those points which I feel are likely to be of special relevance to natural theology. After discussing various aspects of the evolutionary system, its genetical side, his idea of genetical assimilation, the behavioural aspects of an animal's choice of environments and so on, he leads on to a fuller discussion of the socio-genetic system of cultural transmission in man. In the course of developing these ideas he makes the following interesting suggestion:

Man appears to develop ideas whose nature is not a necessary consequence of the environmental circumstances, and in so far as this is the case, these ideas can scarcely arise solely as acquired characters. It is difficult, for instance, to deny that there is some arbitrary element in the distinction between the great religions, such as Christianity and Buddhism. There would seem to be a place in the genesis of new human ideas for some process which shares with gene mutation a characteristic of randomness and unpredictability.²

After discussing the three main categories of animal learning, *i.e.*, reflex, exploratory and social learning, and the means of communication between animals by signs and signals, he points out that students of animal behaviour seem to be agreed that there is a radical difference between all such examples of animal communication and the language system characteristic of man: animals use only signs but man uses

¹*loc. cit.*, p. 77.

²*loc. cit.*, p. 119.

symbols as well as signs. A symbol relates not just to an object or action but refers to a concept, an idea that can be thought about. He quotes Langer as saying: "To me language begins only when a sound keeps its reference beyond the situation of its instinctive utterance, e.g. when an individual can say not only: 'my love, my love!' but also: 'He loves me—he loves me not'." He draws attention to the remarkable efficiency of even primitive languages which only lack vocabulary, and to the fact that nowhere among primitive races have there been found languages in a truly undeveloped state. As soon as symbolic speech appeared natural selection must have accelerated the development of language so that very soon any traces of its earlier stages were eliminated to give the great gap that exists today between animal signs and the simplest human language. This links well with what Polanyi says (quoted on p. 41) about our whole articulate equipment being "a tool-box—a supremely efficient instrument for deploying our inarticulate faculties"; and again it links with what Alfred Russel Wallace said more than a hundred years ago (quoted on p. 36) concerning the power of selection in the evolution of the mind giving "that rapid advancement of mental organization . . . which has raised the very lowest races of man so far above the brutes." Waddington leads on to consider more fully the evolutionary steps that must have been taken before the system of cultural socio-genetic transmission became possible and particularly the psychological modifications that must have been made to form the authority-bearing systems within the mind that he regards as essential to the process.

The question [he says] I should like to ask is not, what are the prerequisites for a moral order; but rather what, over and above rôle discrimination and self-awareness, is necessary for the functioning of a socio-genetic system? . . .

The essential feature in the rôle of the taught, of the recipient of information is to act as though under the authority of something. . . . In sub-human animal societies so far as we know the authority-bearing entity is always external to the recipient individual. This is no longer the case in man. We find, as an empirical fact, that man can as it were "internalize" authority. He can with one part of his mental make-up play the rôle of the taught in relation to some other part which functions as a teacher. Conscience may, as we well know, become a stern internal authority. . . .

. . . the point I wish to stress is that the functioning of a

socio-genetic system depends essentially on the existence of the rôle of authority-acceptor. In man the formation of this rôle is brought about by processes which involve the internalization of authority. And some aspects of this internalized authority have the character for which we give the name ethical. Thus "going in for ethics", or "ethicizing", is for man an integral part of the rôle of the taught or the authority-acceptor, without the existence of which his cultural socio-genetic evolutionary system could not operate.¹

A little later he says that any discussion as to how the human personality can accept authority and so function as a receiver of socially transmitted information must now "lean very heavily" on the work of the psychologists Piaget and Freud:

It is during the first of Piaget's² two periods that the child becomes an "ethicizing" creature; and it is this period, therefore, rather than the second co-operative period, which is of particular interest in the context of this book. What is the nature of the "respect" which appears at this stage, characterizing the relation between the child and its parents? Piaget realizes that "respect", in its ordinary meaning at least, does not fully describe the situation he finds. "It is a fact," he writes (p. 379), "that the child in the presence of his parents has the spontaneous feeling of something greater than and superior to himself. Thus respect has its roots deep down in certain inborn feelings and is due to a *sui generis* mixture of fear and affection which develops as a function of the child's relation to his adult environment."³

The last sentence of that quotation must be of particular interest for us when we consider man's emotions in relation to Divinity. Again I would say, in view of later evidence, this is not necessarily destructive of the idea of a theistic relation; on the contrary I believe it binds our natural theology more closely to the biological system and so gives it a more rational validity. This theme, however, I shall develop in later lectures after we have discussed the evidence from social anthropology.

After a further discussion of Freudian psychology he comes again to the question of authority in the human mind:

The authority which is necessary if man is to be a receiver

¹*loc. cit.*, p. 50. ²Piaget, J., *The Moral Judgement of the Child*. Kegan, Paul, 1932.

³*The Ethical Animal*, p. 157.

of socially-transmitted messages seems to be produced by a mechanism which usually leads to its over-development. Without an internal system of authority an individual of the species *homo sapiens* could not become a human person, but the price he pays is to be inflicted, by the excessive development of authority, with feelings which are described as guilt, anxiety and despair. . . .

Psychoanalysts have discussed extensively the mechanism by which systems having authority are formed within the mind, and the reasons why this process so often, though not inevitably, produces authority which is stronger and more demanding than would seem to be necessary. There is still, of course, considerable debate about the details of the process, but there seems to be general agreement on the one major and essential feature of it; that the authority tends to be personalized. . . .¹

He now discusses the difficult concept of personality and the various psychoanalytical theories as to how the baby becomes a person, particularly the three systems into which the adult mind has been analysed: the id, the ego and the super ego. I shall be coming back to these conceptions later in the lecture on the relations of psychology to natural theology.

There is so much more in Waddington's thesis that I would like to quote and discuss, but time will only allow me to round off his argument with the following extracts from his penultimate chapter which show again how relevant are his ideas to the natural theology we are contemplating and also how far they are from implying an anti-religious materialism:

The functions proper to the belief-structure of the mind are, potentially, best filled by ideals which are of extremely wide range. The brotherly love of the Christians, the intellectual curiosity and good sense of the Greeks, even the orderly British ideal of conduct appropriate to one's station in life, were beliefs general enough in character to apply to almost all the situations which arise in a full and active life. While representing very clearly the ultimate parental authority on which the whole process of social learning rests, they reflect this as a leading and guiding, rather than a merely restraining influence. . . .

An intellectual formulation of such a belief must, indeed, be of a highly abstract nature, and is beyond the capacity of any but

¹*loc. cit.*, p. 164.

a highly-trained mind. Non-intellectual people may, of course, apprehend such ideals; in fact it sometimes appears as if it is easier to attain to a really profound ideal by some unformulated process of an intuitive nature than by close abstract reflection—we must all have met the instances of the simple good man. But even these are all too rare. The beliefs one notices as operative in the personalities one meets are usually focused on some comparatively minor particular, some specific political or religious or ethical point. A devotion which constantly refers back to one of the great large-scale ideals of humanity is something of a rarity in human characters as they are formed by society at the present day. It is surely one of the major tasks of civilization to remedy this, to see that as the child's reverence and love passes on from its parents to some wider authority, it finds itself in the presence not merely of a particular doctrine but directly confronted with the major premises of human society.¹

This indeed is one of the major tasks before us. A devotion to the great large-scale ideals of humanity is rare today because they have been based upon earlier theologies which are rightly questioned and usually doubted by those with a modern outlook.

There are [he continues] several current ideals of breadth and scope sufficient to rank among the mainsprings of civilization. Perhaps it is not always realized that science, as it has grown under the co-operative efforts of so many men, has by now become one of the most compelling of the possible candidates for the position of internal authority in the human belief-structure. . . .

I would not say that the scientific ideal alone is a wholly adequate foundation for the good life of the individual, or the highest civilization of society; but my main reason for this is the conviction . . . that no single ideal is sufficient. The authority of science gives its sanction to one of the greatest creations of the human mind—the attitude of logical thought continually checked by the empirical appeal to the experiment—but it needs, in my view, to be supplemented by the ideal of the creative artist—an ideal which expresses itself in thought-processes which move in a different dimension to those of logic and experiment.

¹*loc. cit.*, p. 197.

These two ideals—the combination of reason and empiricism which is usually held to comprise the whole of science, and the creative imagination or intuition which is considered to be characteristic of art—form a dualism in different dimensions, of the kind I have been discussing. Actually a simultaneous belief in both of them is already incorporated in the practice, though not usually explicitly in the theory, of scientific work. Logic and experiment begin only after intuition has apprehended the problem. A really new scientific idea, of wave-mechanics, of genes, or even a new hunch about some quite specialized and technical matter, is an imaginative production, dependent on faculties which do not differ in kind from those which gave rise to Cubism or *Ulysses*.¹

The creative imagination or intuition which is characteristic of both art and the sudden realization of a new scientific idea are certainly in a different category of nature from that containing physical matter and energy as we now understand them. There is indeed a dualism here—the one I discussed in the last lecture; it is one that must be acknowledged, although, as I have said, it may well be resolved in a philosophic monism of the future. In a later lecture I shall be suggesting that the inspiration of art, the love of natural beauty, and the numinous are all facets of the reality in human life which I am calling the Divine Flame.

¹*loc. cit.*, p. 198.

LECTURE III

EVIDENCE FROM SOCIAL ANTHROPOLOGY

I shall begin my outline of the natural history of religion by considering the evidence from social anthropology. Such studies have undergone a marked change in the present century. While still itself perhaps more in the phase of natural history, social anthropology is now developing into a truly scientific study of human ecology and behaviour based upon prolonged investigations in the field. The observers are no longer content just to visit this or that tribe and report upon what they can gather from interviews through an interpreter and the attendance at certain ceremonies; they go and live with the people, thoroughly learn their language and enter into their way of life before they attempt to give an account of their social and religious behaviour. Let us see what kind of evidence we can gain from such studies as to the nature of religious experience.

This new attitude is very different from that of the nineteenth century when social anthropology came into being. That period was indeed decorated with the illustrious names of the enthusiastic pioneers who not only collected together a vast body of facts from all parts of the world, but brought the subject of ethnology, as it was then more often called, before the public eye. The names of Sir Edward Tylor and Sir James Frazer in this country, Emile Durkheim and Lucien Lévy-Bruhl on the continent stand out. They, and many more, undoubtedly played a great part in laying the foundations of the subject, but today they are not infrequently referred to by the moderns as the arm-chair anthropologists. Professor Evans-Pritchard¹, who tells us that with one exception no anthropologists conducted field studies until the end of the nineteenth century, recalls that William James once asked Sir James Frazer about the natives he had known; whereupon Frazer exclaimed "But Heaven forbid!" They were the

¹*Social Anthropology*, p. 72.

ardent theorists in the period following the impact of Darwin's *Origin of Species* and *The Descent of Man*; by studying present-day primitive tribes they expected to throw much light on the path that the more sophisticated races had traversed in the evolution of their thought and behaviour leading to modern civilization. Such a view was clearly expressed by Sir James Frazer in his inaugural lecture when taking up the chair of Social Anthropology at Liverpool¹:

Thus the study of savage life [he said] is a very important part of Social Anthropology. For by comparison with civilized man the savage represents an arrested or rather retarded stage of social development, and an examination of his customs and beliefs accordingly supplies the same sort of evidence of the evolution of the human mind that an examination of the embryo supplies of the evolution of the human body. To put it otherwise, a savage is to a civilized man as a child is to an adult; and just as the gradual growth of intelligence in a child corresponds to, and in a sense recapitulates, the gradual growth of intelligence in the species, so a study of savage society at various stages of evolution enables us to follow approximately, though of course not exactly, the road by which the ancestors of the higher races must have travelled in their progress upward through barbarism to civilization.

It was taken for granted that the primitive races of today must be in a much lower phase of mental evolution than ourselves; this appeared at first to be supported by the observations of some of the great traveller naturalists, but not all. Those views which appeared to fit in with the current Darwinian stream of thought were seized upon as undoubtedly representing the true state of affairs; the others were neglected as merely sentimental and unreliable feelings towards our lower simple brethren. Sometimes Darwin's own account of his first meeting with the native inhabitants of Tierra del Fuego has been quoted to show the appallingly primitive state of some races of man. He described the incident as "without exception the most curious and interesting spectacle I ever beheld: I would not have believed how wide was the difference between savage and civilized man; it is greater than between a wild and domesticated animal, inasmuch as in man there is a greater power of improvement." Those who quoted such a passage from Darwin had forgotten or not read other passages

¹*The Scope of Social Anthropology* published as an addition to his *Psyche's Task* in its second edition in 1913.

in the same journal where he describes the demeanour of the three Fuegians whom Captain Fitzroy had on a previous voyage taken to England to be educated and was now returning to their native land on the *Beagle*. They were named, you may remember, York Minster, Jemmy Button and Fuegia Basket. Of them Darwin, who had all the voyage out on which to observe them, says "York Minster was . . . reserved, taciturn, morose and when excited violently passionate; his affections were very strong . . . , his intellect good. Jemmy Button was a universal favourite, but likewise passionate; the expression on his face at once showed his nice disposition. He was merry and often laughed, and was remarkably sympathetic with any one in pain. . . . Lastly Fuegia Basket was a nice, modest, reserved young girl, with a rather pleasing but sometimes sullen expression, and very quick in learning anything, especially languages . . ."

Let me illustrate the views of some of today's social anthropologists on their predecessors of the last century by a few quotations from works published in the last ten years or so. Dr. Godfrey Lienhardt, Lecturer in African Sociology at Oxford, writes in his recently published *Social Anthropology* (1964):

The foremost of British "arm-chair" anthropologists, Sir James Frazer, became for many years the interpreter of religious and magical beliefs to a public far wider than that of professional anthropologists . . . In addition to his own wide reading—*The Golden Bough* is of value as an encyclopaedia and bibliography alone—Frazer had an extensive range of admiring correspondents in foreign parts who were able to make inquiries on the spot about customs and beliefs which he drew to their attention. . . .

Frazer's psychological insight, on which he prided himself, was often at fault, largely because he thought that he could understand very foreign beliefs quite out of their real contexts simply by an effort of introspection. He and others of his time had something of the approach of Sherlock Holmes in the works of his near-contemporary, Conan Doyle: "You know my methods in such cases, Watson: I put myself in the man's place, and having first gauged his intelligence, I try to imagine how I myself should have proceeded under the same circumstances." Such deductive procedures might have their merits in the study of people with whom the investigator had much in common. They could only mislead where the student was a middle-class

Victorian scholar, and the subject an Australian aborigine or ancient Egyptian priest. Nevertheless Frazer's was a remarkable achievement. He showed the possibility of a wide-ranging comparative study of religion, which would reveal underlying similarities between "advanced" and "savage" beliefs; and he did begin to identify and define certain widespread institutions, notably that of "divine kingship" where the king is also high priest, still frequently referred to by anthropologists.

Professor E. E. Evans-Pritchard, Professor of Social Anthropology at Oxford, writes in his book on *Nuer Religion* (1956), to which I shall be referring later in the lecture, as follows:

The theories of writers about primitive religion have not been sustained by research. During the last century what was presented as theory was generally the supposition that some particular form of religion was the most primitive and that from it developed other forms, the development being sometimes presented as a succession of inevitable and well-defined stages. The form of religion presented by a writer as the most primitive was that which he considered to be the most simple, crude, and irrational; to exhibit most conspicuously "crass materialism", "primeval stupidity", "naïve eudaemonism", "crude anthropomorphism", or "daemonic dread".

Again writing in *The Institutions of Primitive Society* (1954) the same author says:

But though pictured as immersed in religious superstition it was incompatible with positivist and evolutionary dogmas that the most primitive peoples known to us should have monotheistic religions, or indeed even the conception of God. Sir Edward Tylor, the leading anthropologist in England in the latter half of last century, laid it down as an axiom that the idea of God is a late conception in human history, the product of a long development of animistic thought; and this was so much taken for granted that no one would listen when Andrew Lang, and after him Wilhelm Schmidt, pointed out that, as far as the most primitive peoples in the world today are concerned, the evidence points to the opposite conclusion.

Professor Meyer Fortes, Professor of Social Anthropology at Cambridge, writes in the same volume:

Anthropologists, nowadays, fight shy of expressions like *The Mind of Primitive Man*; for there is no such being as a generic

primitive man and no such entity as a collective mind of any variety of mankind. The phrase comes, by long descent, from men of letters and social philosophers who know primitive societies only at second hand and use the knowledge to support a pet theory. . . .

A little later he makes the following telling comparison:

To appreciate the religious, magical, and mythological beliefs and practices of primitive peoples we must recognize that they are expressions of the common humanity of all mankind. Apart from being far more logically coherent, once the premises are granted, African beliefs about witches are startlingly like those of Shakespeare's day. Sir Isaac Newton held beliefs about occult powers that would seem thoroughly sensible to a modern Melanesian or pagan African, and I do not suppose anybody would claim that he was a savage in his mental development, or inferior in intellectual capacity to the mathematical physicists of today.

He goes on to draw further comparisons between our own and more primitive societies, pointing out that we have amongst us influential sects whose members regard diseases as entirely spiritual affairs and who would rather die than undergo treatment by drugs or surgery. "There is no belief or practice found in primitive cultures" he says "which lacks a counterpart in our civilization." The truth of this is powerfully brought home to us when we consider the extraordinary variety of what are sometimes called the fringe-religions which flourish in the United States of America, particularly in California. It was the French sociologist Lucien Lévy-Bruhl who in the early days of the century was the great influence in putting forward the idea of the primitive mind against which there has been so much reaction today. Writing of Lévy-Bruhl, Professor Evans-Pritchard¹ says he thinks it is now unanimously agreed among anthropologists that he "made primitive peoples far more superstitious, to use a commoner word than prelogical, than they really are; and he made the contrast more glaring between their mentality and ours by presenting us as more positivist than most of us are."

The other leading French sociologist, Emile Durkheim, has a better standing with the moderns and is particularly important from our special point of view. Dr. Lienhardt, comparing him with Sir

¹I have added this from his *Theories of Primitive Religion* (1965) published after I gave my lectures.

James Frazer, describes him as "a more systematic thinker, and one to whom the subject owes more of its current ideas." Evans-Pritchard is equally sympathetic to Durkheim's approach:

For Durkheim and his school, with whom, in this matter, I am in agreement, generalizations about "religion" are discreditable. They are always too ambitious and take account of only a few of the facts. The anthropologist should be both more modest and more scholarly. He should restrict himself to religions of a certain type or of related peoples, or to particular problems of religious thought and practice. Durkheim did not try to explain religion as a universal phenomenon, but only to understand certain characteristic forms it takes in certain primitive societies.

I am sure that many people will be surprised at my looking to social anthropology to provide evidence for the divine in man; indeed perhaps the majority of contemporary anthropologists may think it rather odd that I should be making this attempt. That the general laity are likely to be surprised is not really to be wondered at the ideas of the older writers had been put forward with such force and confidence, as in Tylor's *Primitive Culture* and Frazer's *The Golden Bough*, that they are still thought, erroneously, to be more or less the generally accepted doctrines. With the anthropologists themselves it is different; while they no longer hold the theories of the older writers to be true, they are still influenced by them in as much as, with a few notable exceptions, they believe that religion can no longer be a valid subject for study. The exceptions are important. Evans-Pritchard in his Aquinas Lecture of 1959 on "Religion and the Anthropologists"¹ paints for us the picture of the earlier development of the agnostic atmosphere and its maintenance among most of his colleagues of today:

It was in such a climate of Comtism, utilitarianism, Biblical criticism, and the beginnings of comparative religion that social anthropology, as we now understand it, came into being. It was a product, as were ultimately all the others, of eighteenth-century rationalist philosophy, and more particularly of the stream of thought from Hobbes and Locke, through Hume and the Scottish moral philosophers, sceptics and Deists. Its founders were such men as McLennan, Lubbock, Tylor, and, later, Frazer, all great believers in laws of social evolution and in the

¹*Blackfriars*, April (1960) (reprinted in *Essays in Social Anthropology*, 1962).

necessary interdependence of institutions, and all, if one may judge from their writings and from what information one otherwise has about them, agnostics and hostile to religion. . . .

All the leading sociologists and anthropologists contemporaneous with, or since, Frazer were agnostics and positivists—Westermarck, Hobbhouse, Haddon, Rivers, Seligman, Radcliffe-Brown and Malinowski; and if they discussed religion they treated it as superstition for which some scientific explanation was required and could be supplied. Almost all the leading anthropologists of my own generation would, I believe, hold that religious faith is total illusion, a curious phenomenon soon to become extinct and to be explained in such terms as “compensation” and “projection” or by some sociologicistic interpretation on the lines of maintenance of social solidarity. It has been, and is, the same in America.

Am I not vainly trying to stand against the stream? It is with the “notable exceptions” to whom I have just referred that I shall deal; I believe that their work, when better understood, will turn the tide. Among these I will include Malinowski, perhaps to the still further surprise of some; he is, I think, generally thought of as a complete agnostic on account of his earlier writings, but not by those who have read his Riddell Memorial Lectures, *The Foundation of Faith and Morals*, to which I shall presently refer.

It is with the ideas of Emile Durkheim and of Dr. R. R. Marett that I particularly wish to deal, although at the end I shall discuss the two remarkable and recent monographs on primitive religion, that of the Nuer and of the Dinka tribes, by Evans-Pritchard and Lienhardt respectively. The notions underlying the views of Durkheim and Marett are, I think, perhaps closer together than many scholars perhaps realize. They seem to have come to the same way of thinking largely independently. Durkheim stressed the importance of the social influence on the formation of religious concepts more than Marett and I will refer to this at once because it has an interesting relation to the views of Waddington which I discussed in the last lecture. I shall presently be giving extracts from Durkheim’s great work *Elementary Forms of Religious Life*, but before I do so, let me give two more quotations from Evans-Pritchard and Lienhardt which emphasize again the respect with which Durkheim’s views are still held. The former writes¹:

¹In *The Institutions of Primitive Society*, p. 5.

Catching up with it anthropologists now often explain religion in terms of projection, following Freud, for whom religion is an illusion characteristic of a phase of immaturity both for the individual and for the human race.

Durkheim and his colleagues and pupils of the *Année Sociologique* have steadfastly, and in my opinion rightly, opposed any such psychological explanations of religion. In their view religious facts, whatever else they may be, are social facts and cannot therefore be explained only in terms of individual psychology.

And Lienhardt writes (and this is, I think, particularly relevant to Waddington's ideas) as follows:

. . . In general, the French sociologists of Durkheim's school established convincingly that social tradition moulds the individual conscience more fully than even the most self-conscious members of a society usually recognize. Different societies exhibit different *patterns* of thought, different "collective representations" as the French called them, and these collective representations are the object of specifically sociological study.

Now let us discuss more fully the views put forward by Durkheim in his *Elementary Forms of Religious Life*; all the quotations I make will be from the English translation by J. W. Swain (1915). He sets out to study, to analyse and attempt to explain the most primitive and simple forms of religion known; *i.e.* those belonging to societies which are not surpassed by others in simplicity and which can be explained without borrowing elements from any previous religion. In his introductory chapter he expresses his conviction of the reality of such religious phenomena. If we only consider the "letter of the formulae" such religious practices may indeed appear disconcerting and suggest that they are to be attributed to some deep-rooted error.

But [he says] one must know how to go underneath the symbol to the reality which it represents and which gives it its meaning. The most barbarous and the most fantastic rites and the strangest myths translate some human need, some aspect of life, either individual or social. The reasons with which the faithful justify them may be, and generally are, erroneous; but the true reasons do not cease to exist, and it is the duty of science to discover them.

He goes on to explain that the general conclusion of his book is that primitive religion is "something eminently social" and that its rites are a manner of acting taking place in assembled groups in order to

excite, maintain or recreate certain mental states within such groups. He believed that totemism is the most primitive religion known and even, in all probability, that has ever existed, and that originally it was not concerned with the existence of spirits, genii or divine personalities. This view, that totemism is *the* most primitive form of religion, while for a time widely held under his influence, is, I am told, by no means so easily accepted by anthropologists today; it is rather regarded, I believe, as a special case of something much more general. I am not, however, concerned with the truth or otherwise of this hypothesis; it is Durkheim's discussion of the nature of the religion and the experiences accompanying it that is of much greater interest for us than the primitiveness of totemism which may for long be debated.

The totem is the emblem of the clan, and is very often, but not always, of animal form, something like the British lion or American eagle standing for national pride and prestige, but of greater significance—indeed more like the British or American flag, something that the members of the clan regard as sacred and would, if need be, die for, as a soldier might give his life in an impossible attempt to regain a captured standard from an enemy. Durkheim explains the significance of the totem in these words:

If a certain species of animal or vegetable is the object of a reverential fear, this is not because of its special properties, for the human members of the clan enjoy this same privilege, though to a slightly inferior degree, while the mere image of this same plant or animal inspires an even more pronounced respect. . . . Totemism is the religion, not of such and such animals or men or images, but of an anonymous and impersonal force, found in each of these beings but not to be confounded with any of them. No one possesses it entirely and all participate in it. It is so completely independent of the particular subjects in whom it incarnates itself, that it precedes them and survives them. Individuals die, generations pass and are replaced by others; but this force always remains actual, living and the same. It animates the generations of today as it animated those of yesterday and as it will animate those of to-morrow. . . .

The idea of totemism is not at first an easy one to grasp. When a native of a particular tribe, with for example a crow as its totemic symbol, says that all the members of the tribe are crows, he means that the same principle, which is their most essential characteristic,

is found in all of them and is one which they have in common with the animals of their symbolic name, in this case crows. The world as totemism sees it, is animated by forces which the imagination links with various animal forms. I quote again from Durkheim:

When someone asks a native why he observes his rites, he replies that his ancestors always observed them, and he ought to follow their example. So if he acts in a certain way towards the totemic beings, it is not only because the forces resident in them are physically redoubtable, but because he feels himself morally obliged to act thus; he has the feeling that he is obeying an imperative, that he is fulfilling a duty. For these sacred beings, he has not merely fear, but also respect. Moreover, the totem is the source of the moral life of the clan. All the beings partaking of the same totemic principle consider that owing to this very fact, they are morally bound to one another; they have definite duties of assistance, vendetta, etc., towards each other; and it is these duties which constitute kinship. So while the totemic principle is a totemic force, it is also a moral power; so we shall see how it easily transforms itself into a divinity properly so-called.

Moreover, there is nothing here which is special to totemism. Even in the most advanced religions, there is scarcely a god who has not kept something of this ambiguity and whose functions are not at once cosmic and moral. At the same time that it is a spiritual discipline, every religion is also a means enabling men to face the world with greater confidence.

Now just as a primitive totemism is widespread among the tribes of Australia, so it was also among a large number of American Indians, especially those tribes belonging to the great Sioux family such as the Omaha, Ponka, Kansas, Dakota, Iowa, Winnebago, etc. Among all these people "there is a pre-eminent power to which all the others have the relation of derived forms and which is called *wakan*." Among the Omaha there are totems of all sorts, both individual and collective, but both are only particular forms of *wakan*. This has often mistakenly been taken to represent a great spirit, but really it is not personified, it, in the words of Riggs (quoted by Durkheim), "embraces all mystery, all secret power, all divinity." Or again in the words of Miss Fletcher¹ (also quoted by Durkheim): "The foundation of the Indian's faith in the efficacy of the totem rested upon his belief concerning nature

¹A. Fletcher. *Smithsonian Report* for 1897, pp. 578ff.

of ideas, corresponding to some determined object. This object has been conceived in a multitude of ways; nature, the infinite, the unknowable, the ideal, etc.; but these differences matter but little. In any case, it was the conceptions and beliefs which were considered as the essential elements of religion. As for the rites, from this point of view they appear to be only an external translation, contingent and material, of these internal states which alone pass as having any intrinsic value. This conception is so commonly held, that generally the disputes, of which religion is the theme, turn about the question whether it can conciliate itself with science or not; that is to say, whether or not there is a place beside our scientific knowledge for another form of thought which would be specifically religious.

But the believers, the men who lead the religious life and have a direct sensation of what it really is, object to this way of regarding it, saying that it does not correspond to their daily experience. In fact, they feel that the real function of religion is not to make us think, to enrich our knowledge, nor to add to the conceptions, which we owe to science, others of another origin and another character, but rather, it is to make us act, to aid us to live. The believer, who has communicated with his god, is not merely a man who sees new truths of which the unbeliever is ignorant; he is a man who is *stronger*. He feels within him more force, either to endure the trials of existence, or to conquer them. It is as though he were raised above the miseries of the world, because he is raised above his condition as a mere man; he believes that he is saved from evil, under whatever form he may conceive this evil. The first article in every creed is the belief in salvation by faith. But it is hard to see how a mere idea could have this efficacy. An idea is in reality only a part of ourselves; then how could it confer upon us powers superior to those which we have of our own nature? Howsoever rich it might be in affective virtues, it could add nothing to our natural vitality; for it could only release the motive powers which are within us, neither creating them nor increasing them. From the mere fact that we consider an object worthy of being loved and sought after, it does not follow that we feel ourselves stronger afterwards: it is also necessary that this object set free energies superior to these which we ordinarily have at our command and also that we have some means of making these enter into us and unite

themselves to our interior lives. Now for that, it is not enough that we think of them; it is also indispensable that we place ourselves within their sphere of action, and that we set ourselves where we may best feel their influence; in a word, it is necessary that we act, and that we repeat the acts thus necessary every time we feel the need of renewing their effects. From this point of view, it is readily seen how that group of regularly repeated acts which form the cult get their importance. In fact, whoever has really practised a religion knows very well that it is the cult which gives rise to these impressions of joy, of interior peace, of serenity, of enthusiasm which are, for the believer, an experimental proof of his beliefs. The cult is not simply a system of signs by which the faith is outwardly translated; it is a collection of the means by which this is created and re-created periodically. Whether it consists in material acts or mental operations, it is always this which is efficacious.

Our entire study rests upon this postulate that the unanimous sentiment of the believers of all times cannot be purely illusory. Together with a recent apologist of the faith¹ we admit that these religious beliefs rest upon a specific experience whose demonstrative value is, in one sense, not one bit inferior to that of scientific experiments, though different from them.

Here Durkheim is making, together with William James, to whom he has just referred, and some others we shall discuss in the next lecture, a statement on the nature of religion which, being based upon a long study of human behaviour, is, I believe, one of the foundation stones of our coming science of natural theology. He goes on to say much more about the development of religion as a social force. Many who have not read Durkheim sufficiently carefully have thought, I believe, that his theory of religion is one linking it to a simply *mechanistic* interpretation of the evolution of man as a social animal. Nothing could be further from the truth, as is clearly shown by the following statement:

... it is necessary to avoid seeing in this theory of religion a simple restatement of historical materialism: that would be misunderstanding our thought to an extreme degree. In showing that religion is something essentially social, we do not mean to say that it confines itself to translating into another language the material forms of society and its immediate vital necessities.

¹William James, *The Varieties of Religious Experience*.

It is true that we take it as evident that social life depends upon its material foundation and bears its mark, just as the mental life of an individual depends upon his nervous system and in fact his whole organism. But collective consciousness is something more than a mere epiphenomenon of its morphological basis, just as individual consciousness is something more than a simple efflorescence of the nervous system. . . .

One last quotation from Durkheim and I must leave this mine of fascinating ideas;

In summing up, then, we must say that society is not at all the illogical or a-logical, incoherent and fantastic being which it has too often been considered. Quite on the contrary, the collective consciousness is the highest form of the psychic life, since it is the consciousness of the consciousnesses.

Now let me turn to Dr. Marett's views, and again I shall largely let him speak for himself. Whilst he recognizes the importance of the social psychological studies of the Durkheim school, he lays more emphasis on individual psychology¹. He, very early in his writings, in breaking away from the notions of the previous century, remarks upon the difficulties of interpreting primitive religion:

Now for most persons, probably, the emotional side of religion constitutes its more real, more characteristic feature. Men are, however, obliged to communicate expressly with each other on the subject of their religious experience by the way of ideas solely. Hence, if for no other reason, the ideas composing the religious state tend to overlay and outweigh the emotional element, when it comes to estimating man's religious experience taken at its widest. Thus we catch at an idea that reminds us of one belonging to an advanced creed and say, Here is religion; or, if there be found no clear-cut palpable idea, we are apt to say, There is no religion here; but whether the subtle thrill of what we know in ourselves as religious emotion be present there or no, we rarely have the mindfulness or patience to inquire, simply because this far more delicate criterion is hard to formulate in thought and even harder to apply in fact.²

In describing elementary religion he says:

Of all English words awe is, I think, the one that expresses the fundamental religious feeling most nearly. Awe is not the same

¹See his *The Threshold of Religion* (revised edition 1914) pp. 122-3.

²*loc. cit.*, p. 5.

thing as "pure funk." "*Primus in orbe deos fecit timor*" is only true if we admit wonder, admiration, interest, respect, even love perhaps, to be, no less than fear, essential constituents of this elemental mood.¹

In the same work we find this statement of his religious philosophy: As regards theory, I would rest my case on the psychological argument that, if there be reason, as I think there is, to hold that man's religious sense is a constant and universal feature of his mental life, its essence and true nature must then be sought, not so much in the shifting variety of its ideal constructions, as in that steadfast groundwork of specific emotion whereby man is able to feel the supernatural precisely at the point at which his thought breaks down.

Marett again and again stresses that in primitive religion, all over the world, we see man making contact with a "power" that helps him in his life:

But enough has been said to show that, corresponding to the anthropologists' wide use of the term "religion", there is a real sameness, felt all along, if expressed with no great clearness at first, in the characteristic manifestations of the religious consciousness at all times and in all places. It is the common experience of man that he can draw on a power that makes for, and in its most typical form wills, righteousness, the sole condition being that a certain fear, a certain shyness and humility, accompany the effort so to do. That such a universal belief exists amongst all mankind, and that it is no less universally helpful in the highest degree, is the abiding impression left on my mind by the study of religion in its historico-scientific aspect.² Or in another example:

A play of images sufficiently forcible to arouse by diffused suggestion a conviction that the tribal luck is taking a turn in the required direction is the sum of his theology; and yet the fact remains that a symbolism so gross and mixed can help the primitive man to feel more confident of himself—to enjoy the inward assurance that he is in touch with sources and powers of grace that can make him rise superior to the circumstances and chances of this mortal life.³

Or again:

¹*loc. cit.*, p. 13.

²*Psychology and Folk-lore* (1920) p. 166.

³*Head, Heart and Hands in Human Evolution* (1935), p. 17.

... religious observances of every kind would seem to have an absorbing quality of appeal that causes the participant to feel that for the moment he lives a life apart, is removed to another world. He is on a plane of existence where he seems to do hard things easily. Of course, he is more or less aware at the time that he is doing them symbolically, not actually. Even so, he now feels that he could do them as never before—that, given his present temper, they are as good as done. . . . This new plane of experience is one baffling to the intellect because the literal, the language of the senses, no longer suffices; but it is apprehensible to the mind as a whole, since on the side of feeling and will the value of the dynamical mood approves itself directly. Herein, then, lies the truth of religious symbolism—not in what it says, for it speaks darkly, but in what it makes a man feel, namely, that his heart is strong.¹

There is much more of Marett that I would like to include, but I can give only one more quotation; it is the ending paragraph of his lecture on "Faith" in his Gifford Lectures *Faith, Hope and Charity in Primitive Religion*:

To sum up, then, it would appear that the religious faith of the savage is not merely a will to believe a lot of nonsense. Nor, again, is it simply a will to take his world as he finds it, because in order to live up to such a hard world a man has to be fit, and fitness depends on *mana*. Now *mana* stands at once for miracle and for *morale*; and who will say that the savage is not right in identifying the two. With wonder and positive awe he discovers, as we all may do, that the moral order is capable of supplying out of itself the motive—the "drive"—necessary to evoke moral action on the part of Man. This revelation comes, however, to the primitive man in a special way. So concrete-minded is he that he is bound to be more or less of a pantheist. He encounters the divine stimulus here, there, and anywhere within the contents of an experience in which percepts play a far more important part than concepts. The civilized man, on the other hand, thanks to a far wider system of communications which entails a free use of mental symbols, favours a more abstract notion of deity, seeking to grasp it in the unity of its idea rather than in the plurality of its manifestations. Now in both these directions there lies danger, but in a different form. As for the

¹*Faith, Hope and Charity in Primitive Religion* (1932), pp. 14-15.

savage, it is not a starved intellectualism that he has to fear, but on the contrary a sensualism nourished on a miscellaneous diet that is mixed up with a good deal of dirt. Yet, even though none of us may have reason to envy the child of nature either for his innocence, or for his digestion, the fact remains that he is uncritical of his rough fare and can extract from it all the rude health that a man can want. Whatever, then, may be the final judgement of Ethics, a comparative history of Morals is bound to assume that among the mixed ingredients of his religion the holiness prevails over the uncleanness, since the vital effect is to encourage him in a way of life that has survival value. Thus, anthropologically viewed at all events, the faith of the savage is to be reckoned to him for righteousness.

I come now to those most significant Riddell Memorial Lectures on *The Foundations of Faith and Morals* delivered in 1934-5 by B. Malinowski who for so long must have appeared to be a materialistic rationalist. Here, as an anthropologist he is discussing our main interest: the scientific study of religion. He has clearly been much influenced by the calamity of the First World War and still more by the events which followed it; he is lecturing soon after Hitler came to power. Speaking of anthropology as the comparative science of human cultures, he says the student of human institutions is feeling less and less inclined to confine himself to the so-called primitive or simple cultures: "he draws on the savageries of contemporary civilization as well as on the virtues and wisdom to be found among the humbler peoples of the world." For him the real "scientific task of anthropology" is to reveal the fundamental nature of human institutions, including religion, through their comparative study:

To many a thinking man and woman one of the most important questions of the day is the place of religion in our modern culture. Is its influence on the wane? Has it failed us, say, in the last war and in the framing of the ensuing peace? Is it gradually receding from the dominant place which it ought to occupy in our public life and private concerns? The attacks on religion nowadays are many, the dangers and snags innumerable and obvious. Yet here again, the comparative study of civilization teaches that the core of all sound communal life has always been a strong, living faith. What about our own civilization? Is there not a slight shifting of the function and substance of religious belief? Do we not observe the infiltration of extraneous dogmas, political and

economic, into the place of the spiritual truths on which Christianity is based? Is it true that some modern political movements, Communism or Fascism, the belief in the saving power of the Totalitarian State and of new Messiahs, brown-, red-, or black-shirted, are becoming, in form and function, the effective religion of the modern world?

From the scientific point of view we must first arrive at a clear conception of what religion is. And this can be best achieved by a comparative study of religious phenomena, carried out in the anthropological spirit. Such a survey will show that, as regards religion, form, function, and substance are not arbitrary. From the study of past religions, primitive and developed, we shall gain the conviction that religion has its specific part to play in every human culture; that this is fundamentally connected with faith in Providence, in immortality, and in the moral sense of the world . . .

Whilst Malinowski explains that he cannot accept any particular revealed religion, Christian or not, he goes on to say that even an agnostic has to live by faith—"in the case of us, pre-war rationalists and liberals, by the faith in humanity and its powers of improvement."

This, however, was a faith "as rudely shaken by the war and its consequences as that of the Christian" so that he finds himself in the same predicament. He goes on later to express his view that it is no easier for an atheist to study religion than for a deeply convinced believer: the former finds it difficult to study seriously facts which appear as a delusion or a trickery, whilst the other will be looking only for evidence of his own special "truth". He pleads for an agnostic, "humble approach to all the facts of human belief, in which the student investigates them with a sympathy which makes him almost a believer, but with an impartiality which does not allow him to dismiss all religions as erroneous whilst one remains true."

It is in this spirit that the Anthropologist must approach the problems of primitive religion if they are to be of use in the understanding of the religious crises of our modern world. We must always keep in sight the relation of faith to human life, to the desires, difficulties, and hopes of human beings. Beliefs, which we so often dismiss as "superstition", as a symptom of savage crudeness or "prelogical mentality", must be understood; that is, their culturally valuable core must be brought to light.

But belief is not the alpha and omega of religion: it is important to realize that man translates his confidence in spiritual powers into action; that in prayer and ceremonial, in rite and sacrament, he always attempts to keep in touch with that supernatural reality, the existence of which he affirms in his dogma. . . .

Now, in a matter of some fifty pages, he makes a brief but broad ethnographic survey sufficient to demonstrate to his own satisfaction, and I believe to that of most of his readers, that a scientific analysis of religion is indeed possible; for there are, he says, "common elements in all religious systems as regards substance, form and function."

We find, moreover [he says] that there exists an intrinsically appropriate subject-matter in every religious system, a subject-matter which finds its natural expression in the religious technique of ritual and ethics, and its validation in sacred history. This subject-matter can be summed up as the twin beliefs in Providence and in Immortality. By belief in Providence we understand the mystical conviction that there exist in the universe forces or persons who guide man, who are in sympathy with man's destinies, and who can be propitiated by man. This concept completely covers the Christian's faith in God, One and Indivisible though present in Three Persons, who has created the world and guides it today. It embraces also the many forms of polytheistic paganism: the belief in ancestor ghosts and guardian spirits. Even the so-called totemic religions, based on the conviction that man's social and cultural order is duplicated in a spiritual dimension, through which he can control the natural forces of fertility and of the environment, are but a rude version of the belief in Providence. . . .

The substance of all religion is thus deeply rooted in human life; it grows out of the necessities of life. In other words, religion fulfils a definite cultural function in every human society. This is not a platitude. It contains a scientific refutation of the repeated attacks on religion by the less enlightened rationalists. If religion is indispensable to the integration of the community, just because it satisfies spiritual needs by giving man certain truths and teaching him how to use these truths, then it is impossible to regard religion as a trickery, as an "opiate for the masses", as an invention of priests, capitalists, or any other servants of vested interests.

The scientific treatment of religion implies above all a clear analysis of how it grows out of the necessities of human life. . . .

I shall now end my lecture with two quite outstanding examples of the modern work; they are made by the observers living with the tribes they studied and getting to know their subjects in such a way that they could analyse their thoughts and behaviour to a remarkable degree. These two studies have been upon neighbouring tribes in the Southern Sudan, the Nuer and the Dinka, both cattle-herding peoples. I will take the latter tribe first because their religion is, I feel, not so highly developed as that of the Nuer.

The study of the Dinka religion was made by Dr. Godfrey Lienhardt, Lecturer in African Sociology at Oxford, and published in 1961 in his book *Divinity and Experience*. The essence of the Dinka's religion is the existence of a spiritual element which they encounter in many different forms in their surroundings and life and to these they give the general name of *jok*. Lienhardt calls them *Powers* rather than spirits. They are "higher in the scale of being than men and other merely terrestrial creatures, and operate beyond the categories of space and time which limit human actions." These Powers are not thought of as forming a separate "spirit-world" of their own; the Dinka think of the world as having a broad division into "that which is of men" and "that which is of Powers". The Dinka religion is concerned with the interrelations of these two different natures in the single world of their own experience.

The Dinka when talking about his religion most frequently uses the word *nhialic* which literally means "up" or "above" and the same word is sometimes used for "the sky", but it is also addressed and referred to as "creator" and "father" and prayers and sacrifices are offered to it. Dr. Lienhardt says that for some purposes it could well be translated as God, yet this will hardly do, for the Dinka will also talk of a multiplicity of beings by the same term *nhialic*. It is used sometimes to mean a Supreme Being and sometimes for the collective activity of these numerous beings. He therefore translates it as Divinity, with a capital letter and without definite or indefinite article. This seems to be the core of their religion—the belief that their world of experience is permeated with Divinity.

Dinka religion, then, is a relationship between men and ultra-human Powers encountered by men, between the two parts of a radically divided world. As will be seen, it is rather phenomenological than theological, an interpretation of signs of ultra-

human activity rather than a doctrine of the intrinsic nature of the Powers behind those signs.¹

The Dinka have myths, very like that of the fall of Adam, which tell of how the worlds of Divinity and of Man, of sky and earth, were originally contiguous and there was no death; but then Man, or rather woman it was, committed the sin of greedily growing more grain than they were allowed to, and so the two worlds became separated. The creation is often spoken of as the work of Divinity's hand, but, says Lienhardt, the Dinka do not think of Divinity as having a face or hands; for them it is just a metaphorical expression as when we speak of "the hand of God". I have already said that the Dinka Divinity is spoken of as both single and manifold; let me now quote again from Lienhardt:

All the sky-Powers are said to "be" Divinity; yet Divinity is not any one of them, nor are all of them merely subnumerations of Divinity. They are also quite distinct from each other, though considered together in relation to men they have a reality of the same kind. The Dinka assert with a uniformity which makes the assertion almost a dogma that "Divinity is one". They cannot conceive of Divinity as a plurality and, did they know what it meant, would deeply resent being described as "polytheistic". What account can we now give ourselves of these Powers, both the same as and other than Divinity? . . .

Our answer is that Divinity as a unity, and Divinity as a multiplicity, are not the products of logical or mystical elaboration of a revealed truth as are our own theological considerations of similar apprehensions. Divinity is manifold as human experience is manifold and of a manifold world. . . .

Divinity, then, corresponds to experience common to all men, and to the Dinka's recognition that a single human nature and condition embraces all. Divinity is thus everywhere, and everywhere the same. The different names by which different peoples know it are matters only of different languages. So in Divinity the Dinka image their experience of the ways in which human beings everywhere resemble each other, and in a sense form a single community with one original ancestor created by one Creator. Divinity therefore transcends the individual and social differentiations the Dinka know, as they recognize them in some ways to be transcended in a fundamental unity of human

¹*Divinity and Experience*, 1961, p. 32.

nature. This theme is frequently stressed in Dinka invocations and hymns:

. . . and you, Divinity, I call you in my invocation because you help everyone and you are great towards [in relation to] all people, and all people are your children¹. . . .

Here again we find this feeling of receiving help from a power beyond the self—Providence if you like. Finally I pass to the religion of that neighbouring tribe, the Nuer, which has been examined in such detail and with such understanding by Professor E. E. Evans-Pritchard in his book *Nuer Religion*. Whilst it was published in 1956, it represents the results of a prolonged study which began in 1930 and yielded two other volumes dealing with the Nuer methods of livelihood, their politics and systems of kinship and marriage. Among the Nuer people religion has developed on to a higher and more philosophical plane than that of the Dinka. Here individual prayer and communication with the Deity is a common practice; with the Dinka, who as a rule make group supplications, individual prayer is a rarity. I can best put a statement of their philosophy in Professor Evans-Pritchard's own words:

Nuer philosophy is . . . essentially of a religious kind, and is dominated by the idea of *kwoth*, Spirit. As Spirit cannot be directly experienced by the senses, what we are considering is a conception. *Kwoth* would, indeed, be entirely indeterminate and could not be thought of by Nuer at all were it not that it is contrasted with the idea of *cak*, creation, in terms of which it can be defined by reference to effects and relations and by the use of symbols and metaphors. But these definitions are only schemata, as Otto puts it, and if we seek for elucidation beyond these terms, a statement of what Spirit is thought to be like in itself, we seek of course in vain. The Nuer do not claim to know. They say that they are merely *doar*, simple people, and how can simple people know about such matters? What happens in the world is determined by Spirit and Spirit can be influenced by prayer and sacrifice. This much they know, but no more; and they say, very sensibly, that since the European is so clever perhaps he can tell them the answer to the question he asks.

Nevertheless, we can reach certain conclusions about the basic features of the conception. . . . Nuer religion is pneumatic and theistic. Whether it can rightly be described as mono-

¹*loc. cit.*, p. 156-7.

theistic is largely a matter of definition. I would say . . . that it can be so described . . . for at no level of thought and experience is Spirit thought of as something altogether different from God . . .

He goes on to discuss different aspects of Nuer religion, saying that a theistic religion need not be either monotheistic or polytheistic, but can be both; at different levels of thought it can be one or the other, or indeed at times might be called totemistic or fetishistic. They are he says "different ways of thinking of the numinous at different levels of experience" and a little later says:

We can say that these characteristics, both negative and positive, of Nuer religion indicate a distinctive kind of piety which is dominated by a strong sense of dependence on God and confidence in him rather than in any human powers or endeavours. God is great and man foolish and feeble, a tiny ant. And this sense of dependence is remarkably individualistic. It is an intimate, personal, relationship between man and God. This is apparent in Nuer ideas of sin, in their expressions of guilt, in their confessions, and in the dominant piacular theme of their sacrifices. It is evident also in their habit of making short supplications at any time. This is a very noticeable trait of Nuer piety, and my conclusions are here borne out by Dr. Lienhardt's observations. He tells me that when he was in western Dinkaland he had in his household a Nuer youth whose habit of praying to God for aid on every occasion of difficulty greatly astonished the Dinka. In prayer and sacrifice alike, in what is said and in what is done, the emphasis is on complete surrender to God's will. Man plays a passive rôle. He cannot get to God but God can get to him. Given this sort of piety, we are not surprised to find that the prophet is more influential than the priest.¹

There could, I think, be no better ending for a lecture on the relation of social anthropology to a natural theology than the last paragraph of Professor Evans-Pritchard's book:

We can, therefore, say no more than that Spirit is an intuitive apprehension, something experienced in response to certain situations but known directly only to the imagination and not to the senses. Nuer religious conceptions are properly speaking not concepts but imaginative constructions. Hence the response

¹*Nuer Religion*, 1956, pp. 315-18.

to them is imaginative too, a kind of miming. Words and gestures transport us to a realm of experience where what the eye sees and the ear hears is not the same as what the mind perceives. Hands are raised to the sky in supplication, but it is not the sky which is supplicated but what it represents to the imagination. . . . If we regard only what happens in sacrifice before the eyes it may seem to be a succession of senseless, and even cruel and repulsive acts, but when we reflect on their meaning we perceive that they are a dramatic representation of a spiritual experience. What this experience is the anthropologist cannot for certain say. Experiences of this kind are not easily communicated even when people are ready to communicate them and have a sophisticated vocabulary in which to do so. Though prayer and sacrifice are exterior actions, Nuer religion is ultimately an interior state. This state is externalized in rites which we can observe, but their meaning depends finally on an awareness of God and that men are dependent on him and must be resigned to his will. At this point the theologian takes over from the anthropologist.

The overriding impression from all these studies of the religions of primitive man from all over the world is that he is conscious of being in touch with some Power which appears to be outside and beyond the individual self and from which he can receive grace: help in the conduct of his life and a sense of renewed vitality. Here indeed is where the natural theologian should take over the contributions from the social anthropologist.

LECTURE IV

NATURALISTS OF RELIGIOUS EXPERIENCE

In the last lecture we saw that the study of the religions of the less sophisticated peoples by those social anthropologists who had truly got to know their subjects—and not just evolved theories about them from their arm-chairs—has shown that the outstanding character of such elementary faiths is a feeling of being in touch with some Power beyond the self from which, with suitable approaches, they can draw help and confidence in their daily life. This field is certainly one important source from which to gather contributions towards the natural history of religious experience which I have suggested must be the forerunner of any attempt to build a more scientific Natural Theology. What other sources can we seek?

“What better source could there be than the Bible?” Christians will ask. It is indeed true that the various sacred writings which in their different ways provide the basic inspiration for one or other of *all* the great religions of the world are each a mine of material for such a natural history. There is no need to stress the reality of this. Let me just give a few examples to show the universality of this sense of dependence on a spiritual Power. Apart from the example—the supreme example for Christians—of the New Testament, where in the literature of the world will we find man’s realization of Divine assistance more beautifully expressed than in *The Book of Psalms*?

Create in me a clean heart, O God;
And renew a right spirit within me.
Cast me not away from thy presence;
And take not thy holy spirit from me.

Restore unto me the joy of thy salvation;
And uphold me with thy free spirit.

*Psalm 51*¹

O God, thou art my God; early will I seek thee:
My soul thirsteth for thee, my flesh longeth for thee
In a dry and thirsty land, where no water is;
To see thy power and thy glory,
So as I have seen thee in the sanctuary.
Because thy lovingkindness is better than life,
My lips shall praise thee.
Thus will I bless thee while I live;
I will lift up my hands in thy name.

*Psalm 63*¹

Or what of this early Stoic saying:

Lead me, O God, and I will follow, willingly if I am wise, but
if not willingly I still must follow.

Or this from Epictetus:

Do with me henceforth as thou wilt. I am of one mind with
Thee, I am Thine. I decline nothing that seems good to Thee.
Send me whither Thou wilt. Clothe me as Thou wilt. Will
Thou that I take office or live a private life, remain at home or
go into exile, be poor or rich, I will defend Thy purpose with
me in respect of all these.

Or if we turn to the Bhagavad-Gita of Hinduism we find:

God is seated in the hearts of all.

Or

Take our salutations, Lord, from every quarter,
Infinite of might and boundless in your glory,
You are all that is, since everywhere we find you . . .

Author of this world, the unmoved and the moving,
You alone are fit for worship, you the highest.
Where in the three worlds shall any find your equal?

Or again from the Sikhs, the dissenters from Brahmanical Hinduism,
we find the following:

¹From *The Bible designed to read as Literature*, edited and arranged by Ernest Sunderland Bates.

There is but one God, whose name is true, the Creator, devoid of fear and enmity, immortal, unborn, self-existent, great and bountiful. (From the *Japji*)

and

God is in my heart, yet thou searchest for him in the wilderness.
(From the *Granth*)

Or take the writings of the Sufi poets of Islamic mysticism in Persia as exemplified by Jalalu D-Din Rumi:

What pearl art Thou, that no man may pay the price?

What doth the World offer, which is not a gift from Thee?

What punishment is greater, than to dwell afar from thy Face?

Torture not thy slave, tho' he be unworthy of Thee!

Volumes towards a natural history of religion could be filled from such sources; no one will deny the force of the apparent spiritual power of the great pioneers and leaders in the many different faiths. The last five examples are all taken from that beautiful anthology *God of a Hundred Names: Prayers of Many Peoples and Creeds* collected and arranged by Barbara Greene and Victor Gollancz. Another great collection of such sources is, of course, Aldous Huxley's *The Perennial Philosophy*. Rudolf Otto in his celebrated book *Das Heilige*, or *The Idea of the Holy* in the English edition, to which I shall be making a fuller reference in the next lecture, writes concerning some modern views on the origin of the early church as follows:

Misapprehension of this is only possible if, attempting a one-sided approach to the phenomenon of the origin of the Christian Church, we try to reconstruct the facts solely by the methods of scholarship, and out of the material afforded, by the staled feelings and blunted sensibility of our present-day artificial civilization and complex mentality. It would be an advantage if, in addition to these methods, an attempt were made to frame a less abstract intuition of the genesis of original and genuine religious communities with the aid of living instances of the thing as it may still be found today. It would be necessary for this to seek places and moments at which even today religion shows itself alive as a naïve emotional force, with all its primal quality of impulse and instinct. This can still be studied in remote corners of the Mohammedan and Indian world. (p. 157)

and a little lower down he emphasizes the point further in a footnote:

It is astonishing that the main problem of Gospel criticism, viz., how the collection of "*Logia*" arose, is not studied in this still-

living milieu. It is even more astonishing that the *logia*-series were not long ago elucidated from the closely corresponding milieu of the "Sayings of the Fathers" ('Αποφθέγματα τῶν Πατέρων), from the Hadith of Muhammed, or from the Franciscan legends. And a particular striking case of the same thing is the collection of the *Logia* of Rāma-Krishna, which has grown to completion in our own day and under our very eyes.

Many may feel, however, that such examples are too exceptional, too abnormal, to provide a good basis for a more general account of the religious attributes of man. There is perhaps no more valuable study in this field than the great pioneer work of William James, forming his Gifford Lectures of 1901 and '02: *The Varieties of Religious Experience, a study in Human Nature*; surely this will always remain one of the classic foundations for the natural history we are seeking. I shall devote a large part of this lecture to discussing his observations and findings, but before I do so, I want to look at and give priority to the work of a still earlier pioneer who set out to do just what Lord Gifford advocated, to apply the scientific method to the study of man's religious behaviour. This is Professor Edwin Diller Starbuck who published his *The Psychology of Religion, an Empirical Study of the Growth of Religious Consciousness* in 1899.

This work of Starbuck's is important historically, in being, I believe, the very first attempt at such a scientific treatment of religion¹. It is also most closely linked to the later study by William James, which, although undoubtedly the greater, should not completely overshadow the originality of the former. William James wrote a preface to Starbuck's book, and his own study is based, to a large extent, upon the material collected by Starbuck; in the foreword to his Gifford Lectures James gives first place among his acknowledgements as follows: "My thanks for help in writing these lectures are due to Edwin D. Starbuck, of Stamford University, who made over to me his large collection of manuscript material," and throughout his work he draws extensively upon those examples.

The writings of these two men, Starbuck and James, illustrate so exactly the scientific treatment of religion for which I am arguing, and give such excellent examples that I shall quote them both extensively. The very opening of Starbuck's book would have made an excellent beginning for my own first lecture, had I not reserved it for here. He begins his introductory chapter thus:

¹See, however, footnote on p. 87.

Science has conquered one field after another, until now it is entering the most complex, the most inaccessible, and, of all, the most sacred domain—that of religion. The Psychology of Religion has for its work to carry the well-established methods of science into the analysis and organisation of the facts of the religious consciousness, and to ascertain the laws which determine its growth and character.

It will be a source of delight to many persons, and of regret to others, that the attempt is at last made to study the facts of religion by scientific methods. Those who believe that law reigns, not only in the physical world but in the mental and spiritual—in other words, that we live in a lawful universe—and who believe, furthermore, that we are helped in becoming lawful creatures by comprehending the order that reigns, will hail this new development with gladness. Those, on the other hand, who hold conceptions which separate sharply the spiritual realm from the mundane, who acknowledge law and the consequent validity of science in the one, but set the other under the control of voluntary and arbitrary decrees, will look on a scientific study of religion with distrust and suspicion. In fact, during the years that these studies in the psychology of religion have been in progress the warning has often been given in good faith that we are entering upon a hopeless quest. The ways of God, it is said, are beyond human comprehension. "The wind bloweth where it listeth and thou hearest the sound thereof, but canst not tell whence it cometh or whither it goeth; so is everyone that is born of the Spirit," is the oft-repeated quotation . . .

Let us understand each other in the beginning. We proceed on the assumption that this is a lawful universe; that there is no fraction of any part of it which is not entirely determined and conditioned by orderly sequence; that the laws which determine every event, no matter how mysterious, are ascertainable and thinkable, provided we have time, patience and wisdom enough to unravel them. The growth of science has been a growth of the recognition of law.

. . . It is scarcely questioned at the present time that all our mental processes follow an orderly sequence. We go one step further, and affirm that there is no event in the spiritual life which does not occur in accordance with immutable laws. The

study of religion is today where astronomy and chemistry were four centuries ago. The world has been taken away from the oracle, alchemist, astrologer and petty gods, and given over to the control of law. Another four hundred years may restore to law the soul of man, with all its hopes, aspirations and yearnings.

He emphasizes that his study is an entirely empirical one on "the line of growth in religion in individuals and an enquiry into the causes and conditions which determine it." His method is to analyze a vast number of records which he obtained as answers to a somewhat elaborate questionnaire sent out to a large number of people.

Now before proceeding to his results let us look at William James's attitude to this method, for his early reactions were ones which may well be those of the majority who first consider them. To begin with he was most sceptical of their possible validity; upon a closer examination, however, he was converted to a full appreciation of their value. His remarks are particularly appropriate in relation to our theme; I quote from his preface to Starbuck's book dated 1899:

Many years ago Dr. Starbuck, then a student in Harvard University, tried to enlist my sympathies in his statistical inquiry into the religious ideas and experiences of the circumambient population. I fear that to his mind I rather damned the whole project with my words of faint praise. The question-circular method of collecting information had already, in America, reached the proportions of an incipient nuisance in psychological and pedagogical matters. Dr. Starbuck's questions were of a peculiarly searching and intimate nature, to which it seemed possible that an undue number of answers from egotists lacking in sincerity might come. Moreover, so few minds have the least spark of originality that answers to questions scattered broadcast would be likely to show a purely conventional content. The writers' ideas, as well as their phraseology, would be the stock-in-trade of the Protestant Volksgeist, historically and not psychologically based; and, being in it one's self, one might as well cipher it all out *a priori* as seek to collect it in this burdensome, inductive fashion. I think I said to Dr. Starbuck that I expected the chief result of his circulars would be a certain number of individual answers relating peculiar experiences and ideas in a way that might be held as typical. The sorting and extracting of percentages and reducing to

averages, I thought, would give results of comparatively little significance.

But Dr. Starbuck kept all the more resolutely at his task, which has involved an almost incredible amount of drudging labour. I have handled and read a large proportion of his raw material, and I have just finished reading the revised proofs of the book. I must say that the results amply justify his own confidence in his methods, and that I feel somewhat ashamed at present of the littleness of my own faith.

The material, quite apart from the many acutely interesting individual confessions which it contains, is evidently sincere in its general mass. The *Volksgeist* of course dictates its special phraseology and most of its conceptions, which are almost without exception Protestant, and predominantly of the Evangelical sort; and for comparative purposes similar collections ought yet to be made from Catholic, Jewish, Mohammedan, Buddhist and Hindoo sources. . . .

But it has been Dr. Starbuck's express aim to disengage the general from the specific and local in his critical discussion, and to reduce the reports to their most universal psychological value. It seems to me that here the statistical method has held its own, and that its percentages and averages have proved to possess genuine significance. . . .

James ends his preface by saying that Dr. Starbuck "has broken ground in a new place, his only predecessor (so far as I am aware) being Dr. Leuba in his similar but less elaborate investigation in volume VII of the *American Journal of Psychology* (1896).¹ The examples ought to find imitators and the enquiry ought to be extended to other lands and to populations of other faiths."

As the title of Professor Starbuck's book indicates, his study is essentially one of the growth of religious consciousness and the greater part of it is a comparison between the emotional feelings of those who during adolescence undergo a sudden conversion and those who undergo a more gradual religious development without any such dramatic metamorphosis. While the study deserves special mention

¹I shall be referring to Leuba's work later on (p. 213); whilst he had slightly the priority of publication, it is likely that Starbuck, who had two papers in the same journal in 1897, began his study before Leuba, for as he says in his preface he read his first paper on the subject in 1890 and gave two lectures to the Harvard Religious Union in 1894 and 1895.

for its pioneer character in the scientific treatment of religious experience it must not detain us too long, for we are more concerned with the general nature of the religious attributes of man than with a detailed study of its development. Nevertheless there is much of interest for us in this volume in spite of that further limitation to which William James refers: *i.e.* that the data reviewed are all collected as a result of questionnaires distributed among Protestant Christians.

In the case of conversion what comes out so clearly is the organization of life about a new centre which brings with it two important results: the lifting up of the personality into greater significance and the sense of newness with which the whole world of objects is viewed—a sense of having discovered reality. The person involved appears to have a new feeling of the possession of things and participation in them. Here are a few examples of answers given by those who have undergone conversion. The questionnaire was answered by students of university age but each records the approximate age at which he or she considered that conversion took place:

Girl, at 14: I attended church and engaged in prayer with a new feeling. The Bible was more precious and prayer a comfort and joy.

Girl, at 12: Before, I had studied for praise; now because it was a duty. I had prayed at night; now I went to God at any time. I began to reflect on the Bible and to perform acts of self-denial. All these things were now part of me.

Boy, at 18: I loved to read the Bible now. Its truths were so interesting which before had been insipid.

Boy, at 15: For a long time I tried to *realize my* ideal, quite different from the silken Christianity of today.

The striking feature about so many of these quotations, as Starbuck says, is the way in which things are lifted up above a dead level of commonplaceness—or how a new ego has emerged into a clearer consciousness, feeling a relation existing between it and its spiritual environment. But as he points out, there is also a curious anomaly. Whilst the new life appears to show the self—the me—becoming a point of reference for a larger world of experience, it is also bound up with what seems like a contrary trait: a process of self-forgetfulness and a sympathetic outgoing. This process of unselfing as Starbuck calls it is seen in the following examples of answers:

Boy, at 15: The chief change was in my inmost purpose. I was no longer self-centred. The change was not complete, but there was a deep undercurrent of unselfishness.

Girl, at 12: The change made me very affectionate, while before I was cold to my parents.

Boy, at 14: I felt it my duty after that to be polite and sympathetic. My enemies were changed to friends.

Boy, at 18: My motive to chase worldly riches was changed to that of saving others. I even made mistakes through altruism.

He goes on to show how, in classifying the facts of the changed relation to the world, they fell into three groups depending on the object of attachment: to persons, to nature, and to God or Christ. *Of the first* such examples as "I began to work for others; immediately I was anxious that all should experience the same"; or "I felt for everyone, and loved my friends better;" or "I felt everyone to be my friend", etc. *In relation to nature:* "I had a special feeling of reverence towards nature;" "I seemed to see God's greatness in nature" etc. *In relation to God or Christ:* A girl of 11: "God was not afar off; he was my Father and Christ my Elder Brother;" a girl of 14: "Fear of God was gone; I saw He was the greatest Friend one can have;" a boy of 14: "I felt very near to my God;" a boy of 15: "I felt in harmony with everybody, and all creation and its Creator." He summarizes these results in a table showing the *percentage* of cases in which a changed relation to God, nature and persons was mentioned as a result of conversion as follows:

	<i>Females</i>	<i>Males</i>
Desire to help others	28	28
Love for others	42	42
Closer relation to Nature	31	34
Closer relation to God	43	43
Closer relation to Christ	6	4

It is seen how remarkably similar are the results for the two sexes. Starbuck points out that these percentages express the lowest possible estimate since they represent only the number of cases in which the phenomenon was sufficiently prominent to receive explicit mention. Those feeling a closer relation to God form nearly fifty per cent of the cases if we add those specifically mentioning Christ; it seems reasonable to do this when we remember that those asked were definitely

in a Christian community so that the majority would regard Christ as equal to God. It is interesting that a third of them felt the closer relation to Nature; Otto refers to this in his study of the numinous and we shall consider it in the next lecture.

It is clear from the table, as he says, "that in a large per cent of cases an immediate result of conversion is to call the person out of himself into active sympathy with the world outside." In passing, to illustrate further the beginnings made by Starbuck towards a scientific treatment of religious phenomena I reproduce in Fig. 1 his graph showing the relative frequency of the occurrence of conversion for male and female subjects of different ages. In the population examined the curves suggest that on an average conversion tends to occur a little earlier among girls than among boys, but that, while the number of cases recorded for the two sexes is approximately equal, the phenomenon among girls appears to be nothing like so regular a phase in development as it is with boys; it is likely, indeed, that in female adolescence there are more complex physiological conditions relating to it than in boys.

Let me now quote a few passages from Starbuck:

How does this principle of conversion as an unselfing harmonize with the equally obvious one of conversion as the sense of the new worth of the self? In the first place, the attachment to the world of nature and of spiritual truth grows out of the condition, doubtless, that the new life is a centre of activity, and it must seek an *object* of its expression. We have seen that the new personality is not only an activity, but a conscious activity. . . . In the second place, it appears that the outcrops of self-appreciation and of altruism are two aspects of the same thing, in the same way that self-exaltation and humility may be two manifestations of one underlying condition. If the thing which comes up in consciousness is the fact of the new powers and freedom, the result obtains that the personality feels its worth and exults in its new life. Consciousness may, on the contrary, be directed to the larger life, of which it has become an organic part, and feel most vividly its otherness. It is therefore a matter of selection and emphasis of two things intimately bound together. . . . From the standpoint of development, the essential thing under these two aspects of the new life is the breaking of the shell that has bound the self in its narrow limits, the emerging into the life of the social whole, the going out lovingly and

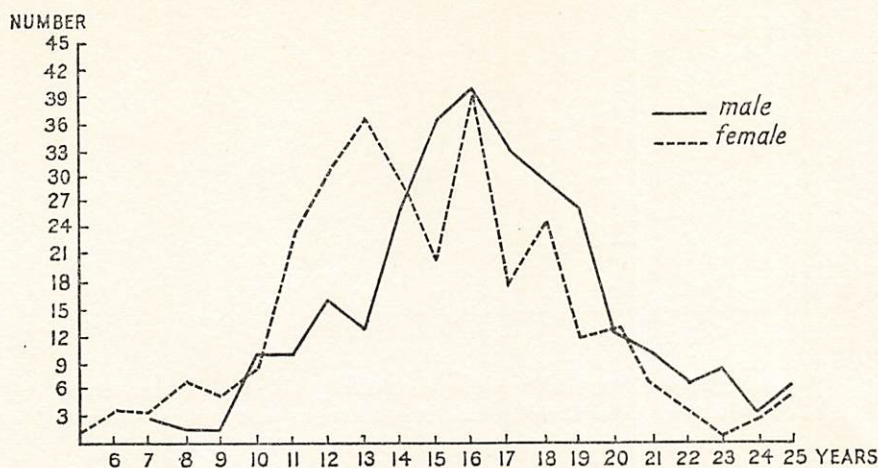


Fig. 1. Professor Starbuck's graph showing the relative number of religious conversions which took place among boys and girls of different ages according to the information given him by university students.

sympathetically as a factor in society, the reaching out into, and becoming one with, the Power that Makes for Righteousness, in short, the bursting the limits of self and being born into a larger life. This expresses itself directly in the altruistic impulses of conversion.

Is not the phrase "becoming one with the Power that Makes for Righteousness" reminiscent of the finding of the social anthropologists regarding the development of religion among the more primitive peoples of the world which we discussed in the last lecture?

Following his treatment of the phenomenon of conversion Starbuck has a corresponding study of religious development which does not involve any such sudden change. He shows that this gradual-growth type is usually just as definite as that of the conversion type. The persons concerned are generally as capable of self analysis, but for them there are no sudden crises which mark the disappearance of an old life and the beginning of a new one. Nevertheless there are points in their development which they recall as being those when definite religious awakenings began; as Starbuck says "conversion is not a unique experience but has its correspondences in the common events of religious growth." I can again best summarize his findings by reproduc-

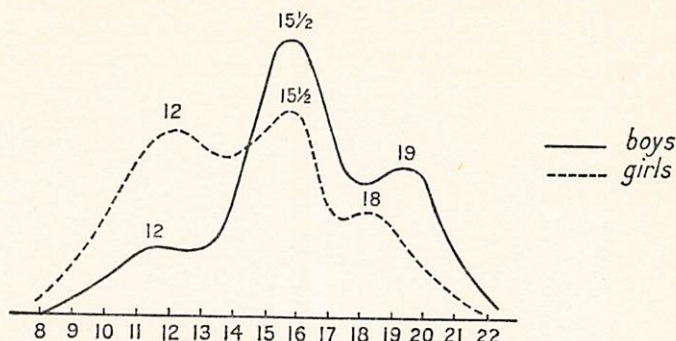


Fig 2. Professor Starbuck's graph comparing the religious awakening of boys and girls other than by sudden conversion. The figures represent years of age.

ing his curves in my fig. 2; they show the relative frequency of the different ages given by students as those at which their religious awakening took place.

I must now leave Starbuck with only the barest reference to his further analysis of adult religious feelings which I can express by a reproduction of one of his tables:

<i>Feelings</i>	<i>Female</i> per cent	<i>Male</i> per cent
Dependence	27	36
Reverence	25	37
Oneness with God, Christ, etc.	27	29
Faith	17	23
Blessedness	13	13
Peace	7	4
Unclassified	14	20
None	5	1

and a final quotation in which he summarizes his findings:

It is safe to say, provided the cases we are studying are typical, that *the line along which religion grows, when represented in terms of feeling, is expressed as dependence, reverence, sense of oneness with God, and faith.* These feelings represent the religious attitude which is not only carried over from childhood to maturity, but which increases with advancing years. They all express relation

between the self and the larger life outside. This bears out the conclusions reached . . . while discussing the nature of religious beliefs; both feelings and beliefs indicate that the bottom truth of religion is that which centres about the relationship of the human being with God.

This pioneer work of Starbuck's has been followed by a number of other statistical treatments; I would particularly mention the relatively recent book *Religious Behaviour* by Dr. Michael Argyle in 1958. This last study, while leading up to a discussion of the different psychological theories of religious behaviour, is more of an ecological treatment of activities than an analysis of religious experiences. These again make valuable contributions to our future science but of a different kind; they are not so much concerned with the various emotional elements but with the effects they have upon the behaviour of people considered as members of the social community. He treats all his data statistically with many tables to demonstrate his findings and often illustrating them by graphs. Another type of contribution to our natural history which might be mentioned here is the book *Puzzled People*: a study in popular attitudes to religion, ethics, progress and politics in a London Borough prepared for the Ethical Union by Mass Observation; whilst this is not a strictly scientific study, being mainly a review of many anecdotal reportings of the opinions of citizens who were asked various questions, it does present one with an all too clear picture of the appalling state of ignorance and indifference concerning religious ideas and doctrines in an average sample of the modern urban community. It is in striking contrast to the study by Starbuck of a predominantly Christian university community.

After this little digression I come now to the views of William James, especially as expressed in his Gifford Lectures *The Varieties of Religious Experience*. I have already hinted that I regard this as perhaps the greatest single contribution yet made in the scientific spirit to the natural history of man's religious life. It is true that much of it deals with the more abnormal side of man's religious development—too much some may say—yet it cannot be too strongly emphasized that in the realm of religious behaviour we do come across much that is abnormal and we must learn to recognize it. However quite apart from these examples, which I shall not deal with here, he sketches out a broad chart of the field to be covered by our natural history and comes to some quite definite conclusions. How can I, in just part of one lecture, hope to cover more than a tiny fragment of what he gave

us in twenty lectures? I cannot, of course, do more than very briefly stress those parts of his work and views which I think are likely to be of greater importance for a future natural theology.

A great deal of his book is taken up by a review of many testimonies of religious experience by a great variety of people. I will only quote two of these, just as examples of the kind of material he is dealing with, and then I shall try to convey the impressions he has gained, from his extensive study, of man's religious nature. I quote from two statements expressing the sense of God's presence; they came from the large collection which he took over from Professor Starbuck. The first one is from a man aged forty-nine, and about it James says "probably thousands of unpretending Christians would write an almost identical account."

God is more real to me than any thought or thing or person. I feel his presence positively, and the more as I live in closer harmony with his laws as written in my body and mind. I feel him in the sunshine or rain; and awe mingled with a delicious restfulness most nearly describes my feelings. I talk to him as to a companion in prayer and praise, and our communion is delightful. He answers me again and again, often in words so clearly spoken that it seems my outer ear must have carried the tone, but generally in strong mental impressions. Usually a text of Scripture, unfolding some new view of him and his love for me, and care for my safety. I could give hundreds of instances, in school matters, social problems, financial difficulties, etc. That he is mine and I am his never leaves me, it is an abiding joy. Without it life would be a blank, a desert, a shoreless, trackless waste.

The second example is from a man of twenty-seven who writes: God is quite real to me. I talk to him and often get answers. Thoughts sudden and distinct from any I have been entertaining come to my mind after asking God for his direction. Something over a year ago I was for some weeks in the direst perplexity. When the trouble first appeared before me I was dazed, but before long (two or three hours) I could hear distinctly a passage of Scripture: "My grace is sufficient for thee." Every time my thoughts turned to the trouble I could hear this quotation. I don't think I ever doubted the existence of God, or had him drop out of my consciousness. God has frequently stepped into my affairs very perceptibly, and I feel that he directs many

little details all the time. But on two or three occasions he has ordered ways for me very contrary to my ambitions and plans.

In circumscribing his field of enquiry James says that different psychologists and philosophers try to specify just what kind of entity religion is: one allies it to the feeling of dependence, another derives it from fear, another connects it with sex, or the feeling of the infinite and so on. Such many different ways of conceiving it should make us doubt if it can really be one specific thing, and once we are prepared to treat the term "religious sentiment" as a collective term, one embracing many sentiments which may be aroused in alternation, we see that it contains nothing of a psychologically specific nature. Whilst we speak of religious love, religious fear, religious awe, or joy and so forth, they are only man's natural emotions directed to a religious object: for example he says "religious awe is the same organic thrill we shall feel in a forest at twilight or in a mountain gorge; only this time it comes over us at the thought of our supernatural relations." (I shall be discussing this and related emotions in the next lecture.) It is the same with all sentiments which may be called into play in the lives of religious persons. Whilst religious emotions, as states of mind made up of a feeling plus a specific sort of object, are psychic entities distinguishable from other concrete emotions, there is, he says "no ground for assuming a simple abstract 'religious emotion' to exist as a distinct elementary mental affection by itself, present in every religious experience without exception." Then he says:

As there thus seems to be no one elementary religious emotion, but only a common storehouse of emotions upon which religious objects may draw, so there might conceivably also prove to be no one specific and essential kind of religious object, and no one specific and essential kind of religious act.

He goes on to say that he will be ignoring entirely the institutional branch of religion, saying nothing of ecclesiastical organization and as little as possible about systematic theology, but will confine himself to personal religion pure and simple. Whitehead's famous definition of religion as "what the individual does with his own solitariness"¹ reflects the attitude which James expressed a quarter of a century earlier:

Religion, therefore, as I now ask you arbitrarily to take it,

¹*Religion in the Making*, 1926.

shall mean for us *the feelings, acts, and experiences of individual men in their solitude, so far as they apprehend themselves to stand in relation to whatever they may consider the divine.*¹

James draws a contrast between the emotional moods of the stoic and the Christian. He says that when Marcus Aurelius reflects upon the eternal reasons at the back of things there is a "frosty chill" about his words which one only rarely finds in Jewish and never in Christian religious writings. Compare, he says, the Roman Emperor's "If gods care not for me or my children, here is a reason for it," with Job's cry "though he slay me, yet will I trust in him." For the stoic the *anima mundi* is there to be respected and submitted to, "but the Christian God is there to be loved." There are Christian saints who have fed on humiliation and privation and the thought of suffering and death, growing in happiness as their outward state becomes more intolerable. "No other emotion than religious emotion" he says "can bring a man to this peculiar pass." (I shall be considering the question of the possible relation between religious masochism and the more erotic deviation in Lecture VII.) It has been objected by some, as I have already hinted, that James dwells too much on the more abnormal examples of religious experience; however, on this he says "when we ask our question about the value of religion for human life, I think we ought to look for the answer among these more violent examples rather than among those of a more moderate hue." I will now quote two passages which I regard as particularly significant for our understanding of the importance of religion in the pattern of human behaviour:

For when all is said and done, we are in the end absolutely dependent on the universe; and into sacrifices and surrenders of some sort, deliberately looked at and accepted, we are drawn and pressed as into our only permanent positions of repose. Now in those states of mind which fall short of religion, the surrender is submitted to as an imposition of necessity, and the sacrifice is undergone at the very best without complaint. In the religious life, on the contrary, surrender and sacrifice are positively espoused: even unnecessary givings-up are added in order that the happiness may increase. *Religion thus makes easy and felicitous what in any case is necessary*; and if it be the only agency that can accomplish this result, its vital importance as a human faculty stands vindicated beyond dispute. It becomes an essential organ of our life, performing a function which no other portion of our

¹*The Varieties of Religious Experience*, p. 31.

nature can so successfully fulfil. From the merely biological point of view, so to call it, this is a conclusion to which, so far as I can now see, we shall inevitably be led, and led moreover by following the purely empirical method of demonstration which I sketched to you in the first lecture. . . .¹

Were one asked to characterize the life of religion in the broadest and most general terms possible, one might say that it consists of the belief that there is an unseen order, and that our supreme good lies in harmoniously adjusting ourselves thereto. This belief and this adjustment are the religious attitude in the soul.²

After discussing a number of examples of the feeling of God's close presence such as the two I have already quoted (p. 94) he goes on to discuss "the convincingness of these feelings of reality." They are, he maintains, as convincing to those who have them as any direct sensible experience can be and are usually much more convincing than "results established by mere logic ever are." He discusses the opposition in philosophy between such mysticism and rationalism. After praising the rationalistic system for giving us among other good things the fruits of physical science, he says, "Nevertheless, if we look on man's whole mental life as it exists . . . we have to confess that the part of it of which rationalism can give an account is relatively superficial." Whilst rationalism has the prestige of being able to challenge you for proofs, "chop logic with you and put you down with words . . . it will fail to convince or convert you if your dumb intuitions are opposed to its conclusions."

If you have intuitions at all [he says] they come from a deeper level of your nature than the loquacious level which rationalism inhabits. Your whole subconscious life, your impulses, your faiths, your needs, your divinations, have prepared the premises, of which your consciousness now feels the weight of the result; and something in you absolutely *knows* that that result must be truer than any logic-chopping rationalistic talk, however clever, that may contradict it.³

He then goes on to say that rationalism is as inferior in founding belief as it is when arguing against it. All the earlier literature which seemed a century ago to demonstrate rational proofs of God's existence "today does little more than gather dust in libraries." Our generation no longer believes in the kind of God it argued for:

¹*loc. cit.*, p. 51.

²*loc. cit.*, p. 52.

³*loc. cit.*, p. 73.

Whatever sort of a being God may be, we *know* today that he is nevermore that mere external inventor of "contrivances" intended to make manifest his "glory" in which our great-grandfathers took such satisfaction, though just how we know this we cannot possibly make clear by words either to others or to ourselves.

James goes on to discuss what he calls the "religion of healthy-mindedness" in its various forms of which Mrs. Eddy's Christian Science is one. He stresses that to be effective an idea must come to the individual with the force of a revelation. The gospel of healthy-mindedness, he says, has come as a "revelation to many whose hearts the church Christianity had left hardened." It is the force of faith, enthusiasm and, above all, of novelty that are the prime agencies of these movements. If ever the mind cure should become official, respectable, and intrenched, these elements of suggestive efficacy will be lost. "The church knows this well enough" he says "with its everlasting inner struggle of the acute religion of the few against the chronic religion of the many, indurated into an obstructiveness worse than that which irreligion opposes to the movings of the Spirit."¹ He goes on to give examples of a number of such mind-cures and points out that while they are trivial instances they demonstrate a method of experiment and verification; it makes no difference whether you regard the patients as deluded victims of their imagination or not, the fact that they seemed to *themselves* to have been cured by the experiments tried was enough to make them converts to the system. Whilst one must be of a certain mental mould to get such results it would surely, he says, "be pedantic and overscrupulous for those who *can* get their savage and primitive philosophy of mental healing verified in such experimental ways as this, to give them up at the word of command for more scientific therapeutics." He now asks "What are we to think of all this? Has Science made too wide a claim?" And there follows a passage we should do well to ponder on:

I believe that the claims of the sectarian scientist are, to say the least, premature. The experiences which we have been studying . . . (and a great many other kinds of religious experiences are like them) plainly show the universe to be a more many-sided affair than any sect, even the scientific sect, allows for. . . . Primitive thought, with its belief in individualized personal forces, seems at any rate as far as ever from being driven

¹*loc. cit.*, p. 113.

by science from the field today. Numbers of educated people still find it the directest experimental channel by which to carry on their intercourse with reality.¹

He goes on to discuss the opposite condition to that of the "healthy-mindedness", that which he calls "the sick soul". He reminds us that the same facts may inspire quite different emotional feelings in different persons or at different times in the same person; and then he points out that "there is no rationally deducible connection between any outer fact and the sentiments it may happen to promote" for they have their source in quite another sphere of existence "in the animal and spiritual region of the subject's being." If we try to conceive ourselves as stripped of all the emotions which the world now inspires and try to imagine it as it exists purely by itself without any favourable or unfavourable comment it will, he says, be almost impossible for us "to realize such a condition of negativity and deadness." The whole universe would be "without significance, character, expression or perspective." He then says this:

Whatever of value, interest, or meaning our respective worlds may appear endued with are thus pure gifts of the spectator's mind. The passion of love is the most familiar and extreme example of this fact. If it comes, it comes; if it does not come, no process of reasoning can force it. Yet it transforms the value of the creature loved as utterly as the sunrise transforms Mont Blanc from a corpse-like grey to a rosy enchantment; and it sets the whole world to a new tune for the lover and gives a new issue to his life. So with fear, with indignation, jealousy, ambition, worship. If they are there, life changes. And whether they shall be there or not depends almost always upon non-logical, often on organic conditions. And as the excited interest which these passions put into the world is our gift to the world, just so are the passions themselves *gifts*,—gifts to us, from sources sometimes low and sometimes high; but almost always non-logical and beyond our control.²

Giving examples of the state of the sick soul and long extracts from Tolstoy and Bunyan he points to the important fact that they could and did find something welling up within them by which such extreme sadness could be overcome. Tolstoy does well "to talk of it as *that by which men live*", he says, "for that is exactly what it is, a stimulus, an excitement, a faith, a force that re-infuses the positive willingness to

¹*loc. cit.*, p. 122.

²*loc. cit.*, p. 150.

live, even in the full presence of the evil perceptions that erewhile made life seem unbearable."¹

James has a long discussion of conversion and we see what prominence he gives to the pioneer work of Starbuck; I will quote from this mainly to emphasize the importance of the Starbuck-James combination as a contribution to our young theological science. It is clear how highly James thought of his forerunner:

Now there are two forms of mental occurrence in human beings, which lead to a striking difference in the conversion process, a difference to which Professor Starbuck has called attention. You know how it is when you try to recollect a forgotten name. Usually you help the recall by working for it, by mentally running over the places, persons, and things with which the word was connected. But sometimes this effort fails: you feel then as if the harder you tried the less hope there would be, as though the name were *jammed*, and pressure in its direction only kept it all the more from rising. And then the opposite expedient often succeeds. Give up the effort entirely; think of something altogether different, and in half an hour the lost name comes sauntering into your mind, as Emerson says, as carelessly as if it had never been invited. Some hidden process was started in you by the effort, which went on after the effort ceased, and made the result come as if it came spontaneously. A certain music teacher, says Dr. Starbuck, says to her pupils after the thing to be done has been clearly pointed out, and unsuccessfully attempted: "Stop trying and it will do itself!"

There is thus a conscious and voluntary way, and an involuntary and unconscious way in which mental results may get accomplished; and we find both ways exemplified in the history of conversion, giving us two types, which Starbuck calls the *volitional type* and the *type by self-surrender* respectively.²

After discussing these two types at some length he says:

Dr. Starbuck gives an interesting, and it seems to me a true, account—so far as conceptions so schematic can claim truth at all—of the reasons why self-surrender at the last moment should be so indispensable. . . . [He] seems to put his finger on the root of the matter when he says that to exercise the personal will is still to live in the region where the imperfect self is the thing most emphasized. Where, on the contrary, the subconscious forces

¹*loc. cit.*, p. 187.

²*loc. cit.*, p. 205.

take the lead it is more probably the better self *in posse* which directs the operation. Instead of being clumsily and vaguely aimed at from without, it is then itself the organizing centre. . . .

. . . One may say that the whole development of Christianity in inwardness has consisted in little more than the greater and greater emphasis attached to this crisis of self-surrender. From Catholicism to Lutheranism, and then to Calvinism; from that to Wesleyanism; and from this, outside of technical Christianity altogether, to pure "liberalism" or transcendental idealism, whether or not of the mind-cure type, taking in the mediaeval mystics, the quietists, the pietists, and quakers by the way, we can trace the stages of progress towards the idea of an immediate spiritual help, experienced by the individual in his forlornness, and standing in no essential need of doctrinal apparatus or propitiatory machinery.

Psychology and religion are thus in perfect harmony up to this point, since both admit that there are forces seemingly outside of the conscious individual that bring redemption to his life. Nevertheless psychology, defining these forces as "subconscious", and speaking of their effects as due to "incubation", or "cerebration," implies that they do not transcend the individual's personality; and herein she diverges from Christian theology, which insists that they are direct supernatural operations of the Deity. I propose to you that we do not yet consider this divergence final, but leave the question for a while in abeyance . . .¹

Now James touches on what I believe to be the most important issue for a natural theology—do these forces which play so important a part in man's religious life belong only to his sub-conscious mind or do they indicate some extra-sensory contact with some Power beyond the self? We shall be considering this problem in a number of other lectures; and James returns to it in his final chapter after some three hundred more pages in which he discusses mysticism and then the more psychological and philosophical aspects of his subject. In this one lecture, in which I am mainly concerned with the evidence for the reality of religious experience, I cannot follow his philosophical discussions further; I must proceed at once to his final conclusions:

Disregarding the over-beliefs [he writes] and confining ourselves to what is common and generic, we have in *the fact that the conscious person is continuous with a wider self through which saving*

¹*loc. cit.*, pp. 209-11.

experiences come, a positive content of religious experience which, it seems to me, *is literally and objectively true as far as it goes*. If I now proceed to state my own hypothesis about the farther limits of this extension of our personality, I shall be offering my own over-belief . . .

The further limits of our being plunge, it seems to me, into an altogether other dimension of existence from the sensible and merely "understandable" world. Name it the mystical region, or the supernatural region, whichever you choose. So far as our ideal impulses originate in this region (and most of them do originate in it, for we find them possessing us in a way for which we cannot articulately account), we belong to it in a more intimate sense than that in which we belong to the visible world, for we belong in the most intimate sense wherever our ideals belong. Yet the unseen region in question is not merely ideal, for it produces effects in this world. When we commune with it, work is actually done upon our finite personality, for we are turned into new men, and consequences in the way of conduct follow in the natural world upon our regenerative change. But that which produces effects within another reality must be termed a reality itself, so I feel as if we had no philosophic excuse for calling the unseen or mystical world unreal.

God is the natural appellation, for us Christians at least, for the supreme reality, so I will call this higher part of the universe by the name of God. We and God have business with each other; and in opening ourselves to his influence our deepest destiny is fulfilled. The universe, at those parts of it which our personal being constitutes, takes a turn genuinely for the worse or for the better in proportion as each one of us fulfils or evades God's demands. As far as this goes I probably have you with me, for I only translate into schematic language what I may call the instinctive belief of mankind: God is real since he produces real effects.¹

In a final postscript James says the same thing but in more philosophic terms; I quoted from this in the last lecture of my former series. The whole tenor of his massive study points to the reality of man's contact with a Power beyond the conscious self; of this he gives innumerable examples. "I am so impressed" he says in his postscript "by the importance of these phenomena that I adopt the

¹*loc. cit.*, pp. 115-17.

hypothesis which they so naturally suggest. At these places at least, I say, it would seem as though transmundane energies, God, if you will, produced immediate effects within the natural world to which the rest of our experience belongs."

It is upon this pioneer natural history of religion of James and Starbuck that we must build; I bracket them together as Darwin and Wallace are linked in biological natural history. Just as their work sprang from the consideration of a large collection of records of experience from a great variety of people, so must our future studies be based upon the analysis of similar collections.

Here I would like to draw attention to a very remarkable flood of such material that is now flowing into the world. It is frankly Christian in nature, but by no means denominational; agnostics may feel that such evidence is too partisan, but surely we can allow for the bias of the Christian outlook which, of course, provides the overtones to these testimonies. Whatever interpretation we are inclined to put on them when we first look at them, whether we regard them as examples of illusion or not, they do provide abundant evidence that a large number of people certainly do feel themselves to be in contact with some greater Power beyond themselves. I refer to the examples which are given in a bi-monthly publication called the *Crusader* issued by Brother Mandus, of The World Healing Crusade, at the International Sanctuary at Blackpool. Whilst the major theme is the acknowledgment of health cures in answer to prayer, the overwhelming impression is a record of a substantial body of people who feel a Divine presence.

It matters not, I believe, under which creed such experiences are felt. They are facts of man's natural history and deserve a great deal more careful analysis and study. It had been my original intention to devote some time in this course of lectures to such a study, presenting a large number of examples for discussion; on second thoughts, however, I think it better merely to point to such sources of material and use my time rather for mapping out the extensive field of study which must go to this building of a more natural theology. Researches into the nature of religious experience from the analysis of records must be a major work in itself; a mere sketch will serve little purpose beyond calling attention to the need for more work in this field, and I hope this one lecture is sufficient to make the point.

I would like briefly to compare with the views of James, those of another psychologist, Sir Frederic Bartlett, who was giving the Riddell Memorial Lectures in 1950, nearly half a century after James's Gifford

Lectures; I gave part of this quotation in the final lecture of my first series. He incidentally speaks of this natural history we are discussing. He says:

I must side-step the whole story of the slow growth of the belief systems of religion. They are a consequence of the necessity that whatever is reached through the religious experience should find its place in our everyday world. There is therefore in the strict sense a natural history of their growth, and I do not think that this has ever yet been properly depicted.

But now see what he says in regard to what he calls, in a heading, "The Power of Religious Action":

Beyond all this there is the power which is alleged to belong to actions that claim a religious sanction. As has been said over and over again this power claims to come either from some vast and perhaps impersonal order which is free from the limitations of the world of ordinary perception and the senses, or from a personal source which has none of the hampering limitations of humanity. Whichever way it is thought of, the claim is that actions are made humanly possible, which, in any purely natural series of cause and event, would not occur, or would occur only now and then. I confess that I cannot see how anybody who looks fairly at a reasonable sample of actions claiming a religious sanction can honestly refuse to admit that many of them could not occur, or at least that it is highly improbable that they would occur in the forms in which they do, if they were simply the terminal points of a psychological sequence, every item in which belonged to our own human, day to day, world. I am thinking not of the dramatic and extraordinary actions which people who write books about religion mostly seem to like to bring forward. They are rare any way. I remember the ways of life of many unknown and humble people whom I have met and respected. It seems to me that these people have done, effectively and consistently, many things which all ordinary sources of evidence seem to set outside the range of unassisted humanity. When they say "It is God working through me", I cannot see that I have either the right or the knowledge to reject their testimony.¹

I will now quote two passages from Dr. L. P. Jacks's Hibbert Lectures of 1922 published under the title of *Religious Perplexities*:

¹*Religion as Experience, Belief, Action* (p. 35), Oxford University Press, 1950.

Religion is a power which develops the hero in the man at the expense of the coward in the man. As the change proceeds there comes a moment when the cowardly method of reasoning, with its eye on safety, ceases to dominate the soul. At the same moment the heroic element awakes and looks with longing towards the dangerous mountain-tops. Thenceforward the man's reason becomes the organ of the new spirit that is in him, no longer fettered to the self-centre, but mounting up with wings as an eagle. (p. 20)

And again, later, is a passage which I quoted in an abridged form¹ in the final lecture of my first series, but which I now give in full:

All religious testimony, so far as I can interpret its meaning, converges towards a single point, namely this. There is that in the world, call it what you will, which responds to the confidence of those who trust it, declaring itself, to them, as a fellow-worker in the pursuit of the Eternal Values, meeting their loyalty to it with reciprocal loyalty to them, and coming in at critical moments when the need of its sympathy is greatest; the conclusion being, that wherever there is a soul in darkness, obstruction or misery, there also is a Power which can help, deliver, illuminate and gladden that soul. This is the Helper of men, sharing their business as Creators of Value, nearest at hand when the worst has to be encountered; the companion of the brave, the upholder of the loyal, the friend of the lover, the healer of the broken, the joy of the victorious—the God who is spirit, the God who is love. (p. 70)

At this point let me refer back to the views of the social anthropologists which we discussed in the last lecture; we see how well their evidence fits in here. I would particularly remind you of two quotations: that paragraph from Durkheim on p. 69 beginning "Our entire study rests . . .", and that from Malinowski on p. 75 beginning "The substance of all religion . . ."

I will end this lecture with one further example of the evidence we may collect towards our natural history from a great variety of writings; this is taken from an address recently given by Mrs. (now Baroness) Mary Stocks to the World Congress of Faiths entitled "The Religion of a Heretic". She says:

. . . Is there something that comes to meet us? Beatrice Webb's

¹I regret that in the version quoted on p. 286 of *The Living Stream* dots were not inserted to indicate where it was abridged.

answer, as recorded in her autobiography carries us straight into the realm of religious faith. "For my own part", she writes "I find it best to live as if the soul of man were in communion with a superhuman force which makes for righteousness. Like our understanding of nature through observation and reasoning, this communion with the spirit of love at work in the universe will be intermittent and incomplete, and it will frequently fail us. But a failure to know and a fall from grace is the way of all flesh.

Beatrice Webb was conscious of experiencing a sense of reverence or awe—an apprehension of a power and purpose outside herself—which she called "feeling" and which was sometimes induced by appreciation of great music or corporate worship. But her experience went further than this nebulous fleeting "feeling"—because as a result of it she achieved a religious interpretation of the universe which satisfied and upheld her and enabled her to seek continuous guidance in prayer—and this without compromising her intellectual integrity. Reason told her *how*—it could not tell her *why*—only faith in an ultimate purpose could tell her *why*. And with that purpose she said she could put herself in touch, and find new strength through prayer. How it happened, she said, she did not know.

Now *that* is a big step forward from rationalism, and once it is taken (as I take it in company with Beatrice Webb) it opens up a great expanse of undiscovered country—the territory that lies beyond reason—and includes what those who have explored it have discovered—or thought they had discovered by extra-sensory perception. . . .¹

This attribute of man which we are discussing appears to have a profound significance. If it is something real, something that can be developed, as so many who have the experience tell us that it can, then it is surely of paramount importance. What more exciting field of human natural history could there be than the collection and study of evidence that may throw more light on the nature of this experience?

¹*World Faiths*, no. 60, July 1964.

LECTURE V

THE NUMINOUS, THE LOVE OF NATURE AND THE INSPIRATION OF ART

I am devoting this lecture to a consideration of the numinous, the love of nature and the inspiration of art. It indeed seems an audacious enterprise to set out to discuss three such subjects in the space of just one hour; each of them could more than occupy complete sets of Gifford Lectures. My object, of course, is not to attempt a systematic study of any one of them but to emphasize that all three must be taken into account in defining the scope of our future science of Natural Theology. I am merely, as I stressed in the last lecture, trying to map out the field to be covered. I shall only discuss the outstanding qualities of each in order to support the claim I shall make that all three, although not identical, are related.

The term numinous which has become so familiar to theologians was introduced by Dr. Rudolf Otto in his celebrated book *Das Heilige*, translated as *The Idea of the Holy*, to designate, not, as is often implied by later authors, man's sense of the Divine presence, but actually a part of the reality and character of that Presence. It is now passing from being a technical theological term into more general parlance so that it is well that we should be quite clear as to its meaning; it is tending to be used more as an adjective than as a noun, as for example in the expressions "the numinous sense" or "numinous emotions". When it is so used we should be careful to remember that this is not really the more essential meaning which Otto intended; it is, however, clearly his own fault that this change of emphasis has occurred, as is well explained by his translator and friend John W. Harvey in his preface to the second edition of the book in question:

When, therefore, Otto uses so frequently expressions like "the numinous feeling" (*das numinose Gefühl*) he must not be taken to be merely repeating the claim of "affect", subjective emotion, to a place in any genuine religious experience. But it would

certainly have been better had he always preferred the alternative phrase "the feeling *of* the numinous". The word "numinous" has been widely received as a happy contribution to the theological vocabulary, as standing for that aspect of deity which transcends or eludes comprehension in rational or ethical terms. But it is Otto's purpose to emphasize that this is an objective reality, not merely a subjective feeling in the mind; and he uses the word *feeling* in this connexion not as equivalent to emotion but as a form of awareness that is neither that of ordinary perceiving nor of ordinary conceiving. Certainly he is very much concerned to describe as precisely, and identify as unmistakably, as possible, by hint, illustration, and analogy, the nature of the subjective feelings which characterize this awareness; but that is because it is only through them that we can come to an apprehension of their object.

Scientists in general, I suppose, would not agree that the term objective could be used for that which is not discerned through the physical senses or their instrumental extensions; however, as a scientist who, on other than scientific grounds, believes in its existence, I should call the numinous a reality perceived by extra-sensory means. It is not itself an emotion like an affective feeling of love, joy or fear; it is something which is producing such feelings. Our awareness of it is most likely reaching us, I believe, as William James suggested, through the "half-open subliminal door." At another point James says:

. . . the existence of mystical states absolutely overthrows the pretension of non-mystical states to be the sole and ultimate dictators of what we may believe. As a rule, mystical states merely add a supersensuous meaning to the ordinary outward data of consciousness. They are excitements like the emotions of love or ambition, gifts to our spirit by means of which facts already objectively before us fall into a new expressiveness and make a new connection with our active life. They do not contradict these facts as such, or deny anything that our senses have immediately seized.¹

Because the word numinous used as a noun was intended by Otto to express the object of our feeling, rather than the emotion it produces, perhaps, in the title of this lecture, I should have put alongside it the "loveliness of nature" not the "love of nature". The numinous is

¹*The Varieties of Religious Experience*, p. 427.

something like loveliness or beauty; it excites the divine spark within us.

Otto says that today the word holy contains for most people an element of moral goodness about it, but the numinous, he insists, is the element of the holy beyond the meaning of goodness. He takes it from the latin *numen*, meaning divine power or majesty. As *omen* has given us "ominous", there is no reason, he says, why from *numen* we should not similarly form a word "numinous". "The nature of the numinous can only be suggested by means of the special way in which it is reflected in the mind in terms of feeling." In the deepest and most sincerely felt religious emotion there is in addition to faith, trust and love, this element which may profoundly affect us. The greater part of Otto's book is devoted to a detailed analysis of the different components of this feeling.

Let us follow it up [he says] with every effort of sympathy and imaginative intuition wherever it is to be found, in the lives of those around us, in sudden, strong ebullitions of personal piety and the frames of mind such ebullitions evince, in the fixed and ordered solemnities of rites and liturgies, and again in the atmosphere that clings to old religious monuments and buildings, to temples and to churches. If we do so we shall find we are dealing with something for which there is only one appropriate expression, "*mysterium tremendum*". The feeling of it may at times come sweeping like a gentle tide, pervading the mind with a tranquil mood of deepest worship. It may pass over into a more set and lasting attitude of the soul, continuing, as it were, thrillingly vibrant and resonant, until at last it dies away and the soul resumes its "profane", non-religious mood of everyday experience.

It is most likely, I think, that different people experience the numinous in different ways according to their varying psychological make up. One of the components Otto gives prominence to is the "element of awefulness"—the sense of mystery—which for some people appears to merge into a sense of dread or fear like the eerie feeling that may be produced by reading a particularly good ghost story late at night. I know the feeling of religious mystery, but I must confess I have never myself experienced in a religious association the feelings of fear which I readily admit *The Ghost Stories of an Antiquary* once gave me. More important, for I think they are more generally felt, are the feelings which may be grouped under what he calls the "element of fascination."

Here, too, [he writes] commences the process of development by which the experience is matured and purified, till finally it reaches its consummation in the sublimest and purest states of the "life within the Spirit" and in the noblest mysticism. Widely various as these states are in themselves, yet they have this element in common, that in them the *mysterium* is experienced in its essential, positive, and specific character, as something that bestows upon man a beatitude beyond compare, but one whose real nature, he can neither proclaim in speech nor conceive in thought, but may know only by a direct and living experience. It is a bliss which embraces all those blessings that are indicated or suggested in positive fashion by any "doctrine of salvation", and it quickens all of them through and through; but these do not exhaust it. Rather by its all-pervading, penetrating glow it makes of these very blessings more than the intellect can conceive in them or affirm of them. It gives the peace that passes understanding, and of which the tongue can only stammer brokenly. . . .¹

He points out that both the element of the mysterious and of fascination, both in their highest development, lead to mysticism:

We saw that in the case of the element of the mysterious, the "wholly other" led on to the supernatural and transcendent, and that above these appeared the "beyond" (*ἐπέκεινα*) of mysticism, through the non-rational side of religion being raised to its highest power and stressed to excess. It is the same in the case of the element of "fascination"; here, too, is possible a transition into mysticism. At its highest point of stress the fascinating becomes the "overabounding", "exuberant", the mystical "moment" which exactly corresponds upon this line to the *ἐπέκεινα* upon the other line of approach, and which is to be understood accordingly. But while this feeling of the "over-abounding" is specially characteristic of mysticism, a trace of it survives in all truly felt states of religious beatitude, however restrained and kept within measure by other factors.² He fully realizes that the numinous is not experienced only

by Christians:

I recall vividly a conversation I had with a Buddhist monk. He had been putting before me methodically and pertinaciously the arguments for the Buddhist "theology of negation", the

¹*The Idea of the Holy*, p. 33.

²*loc. cit.*, p. 36.

I welcome the introduction of the single name of the numinous for all the qualities that it embraces, but I would myself feel that its essence is that which is also essential for Plato and the Neoplatonists which so much influenced religion and Christianity in particular. It is this platonic thread I would suggest, that links together our feeling for the "numinous", our love of nature and the inspiration of art. At the same time that Schleiermacher was writing in Germany, Coleridge in England was writing "A Hymn" which begins thus:

My Maker! of Thy power the trace
 In every creature's form and face
 The wond'ring soul surveys:
 Thy wisdom, infinite above
 Seraphic thought, a Father's love
 As infinite displays!
 From all that meets or eye or ear,
 There falls a genial holy fear
 Which, like the heavy dew of morn,
 Refreshes while it bows the heart forlorn!
 Great God! Thy works how wondrous fair!

And again he has a stanza in "The Aeolian Harp" with a remarkable biological philosophy:

And what if all of animated nature
 Be but organic harps diversely formed,
 That tremble into thought as o'er them sweeps,
 Plastic and vast, one intellectual breeze,
 At once the soul of each, and God of all?

In writing this he must surely have had in mind the theory of "plastic nature" developed by Cudworth, one of that important group of Cambridge Platonists in the seventeenth century; Cudworth's views, and those of his colleague Henry More, had a marked influence on our great naturalist John Ray when he wrote his famous *The Wisdom of God manifested in the Works of the Creation* as is stressed by the late Canon Charles Raven in his Gifford Lectures on Natural Religion and Christian Theology¹.

The Platonic tradition in religious thought was the subject of Dean Inge's Hulsean Lectures² at Cambridge in 1925. I believe his

¹Especially the first series published as *Science and Religion*, 1953.

²*The Platonic Tradition in English Religious Thought*, 1926.

views are of profound importance for us in considering our Natural Theology of the future. His plea is for the recognition of a third type of Christian thought and belief to be considered as a line separate from those of the two main types called Catholic and Protestant but yet penetrating into them.

The three types [he writes in his preface] are happily not mutually exclusive. Just as there is a strong Evangelical element in the best Catholics, and just as many devout Protestants are earnest sacramentalists, so mysticism, and the Christian Platonism which is the philosophy of mysticism, are at home in all branches of Christendom. But I have claimed that the history of Christian Platonism, and the fruits which it has borne, justify its recognition as a legitimate and independent type of Christian theology and practice.

The influence of this third line of thought has been neglected, he believes, because it has never been political:

It did not form a party, but only a school of thought, and a rule of life. Its adherents kindled no fires at Smithfield, and were seldom sent to suffer upon them. They deplored the civil wars in the seventeenth century. They were accused of latitudinarianism under the Stuarts, of "enthusiasm" under the Georges, of "broad" tendencies under Victoria. And yet this type of Churchmanship has been found among High Churchmen and Evangelicals as well as among Liberals. It has established its right in the Church by a long catena of justly honoured names. This third influence comes down to us from the Renaissance, but it has a very much longer pedigree.

He stresses the remarkable fact that the study of comparative religion has revealed that a new spiritual enlightenment came to all the civilized peoples of the earth in the millennium before Christ. It was first felt in Asia, but then in Greece and Southern Italy in the sixth and fifth centuries B.C. It is the recognition of an unseen spiritual world of eternal values behind the material world of the senses. It was this mystical faith, held first by the Pythagoreans, that Plato developed to give it a firm foothold in the west. From its revival in the Neoplatonism of the Roman Empire it passed into the theology and philosophy of the Christian Church. It is not my purpose to discuss the differences in theological opinions concerning the extent of this Hellenic influence which Dean Inge says "may confidently be called the Pauline and Johannine Christianity, though the theology of St.

Paul is woven of many strands." After its eclipse in the Dark and Middle Ages he shows it bursting out with a new and exuberant life in the Renaissance writers; our own Renaissance poetry, he says, is steeped in Platonic thoughts. And later, during the civil troubles of the seventeenth century, it reappears, and I quote again his words, "in a very pure and attractive form in the little group of Cambridge Platonists, Whichcote, Smith, Cudworth and their friends"—the group I have already mentioned. Passing on to later times he says:

The movement of emancipation, as usual, turned men's minds towards Greece. After the French Revolution there was a remarkable outburst of Platonism in English poetry . . . The names of Shelley, Wordsworth, and Coleridge will occur to everybody, and the last two of these were, and wished to be considered, religious teachers. The influence of Plato is also strong in our great didactic prose writers, such as Ruskin, and Emerson in America.

He sums up his thesis in words which I feel have a special relevance for our Natural Theology:

The characteristics of this type of Christianity are—a spiritual religion, based on a firm belief in absolute and eternal values as the most real things in the universe—a confidence that these values are knowable by man—a belief that they can nevertheless be known only by whole-hearted consecration of the intellect, will, and affections to the great quest—an entirely open mind towards the discoveries of science—a reverent and receptive attitude to the beauty, sublimity, and wisdom of the creation, as a revelation of the mind and character of the Creator—a complete indifference to the current valuations of the worldling.

Dean Inge, of course, was one of the greatest disciples of Plotinus; his lectures that I have just been discussing were largely I think a development of the long study which went into his two-volume *The Philosophy of Plotinus* which formed his Gifford Lectures of 1917-18.

At the end of these lectures he gives a further summary of Neoplatonic characteristics which form a good supplement to those just given:

Neoplatonism differs from popular Christianity in that it offers us a religion the truth of which is not contingent on any particular events, whether past or future. It floats freely of nearly all the "religious difficulties" which have troubled the minds of believers since the age of science began. It is dependent on no

miracles, on no unique revelation through any historical person, on no narratives about the beginning of the world, on no prophecies of its end. No scientific or historical discovery can refute it, and it requires no apologetic except the testimony of spiritual experience . . .

. . . Such independence of particular historical events, some of which are supported by insufficient evidence, gives great strength and confidence to the believer. But it does not satisfy those who crave for miracle as a bridge between the eternal and temporal worlds, and who are not happy unless they can intercalate "acts of God" into what seems to them the soulless mechanism of nature . . .

Neoplatonism respects science, and every other activity of human reason. Its idealism is rational and sane throughout.

I will now turn to the loveliness of nature; our love of it is, I am sure, part of this same mystical feeling that is the essence of the Platonic tradition. The two prose writers that Dean Inge singled out in this tradition were Ruskin and Emerson. Let me take this opportunity of reminding you or informing you if you did not know (I was ignorant of it until very recently) that Emerson was one of the authors that Lord Gifford most admired; his lecture on Emerson comes first in the little volume of essays which were privately printed and circulated among his friends after his death. In this essay we see clearly that Lord Gifford himself feels this same spirit:

For indeed [he says] the world is full of good and of excellence to those who will but take it. Every sky, morning and evening, gleams upon us with loveliness, if we but lift our eye to it, even from the city lanes. If you are a true lover you will find beauty every where.

Thou canst not wave thy staff in air,
Or dip thy paddle in the lake,
But it carves the bow of beauty there,
And the ripples in rhymes the oar forsake.

Let me next quote the remarkable passage from Ruskin to which Otto refers in an Appendix to his *The Idea of the Holy*. In it he describes experiences of his youth which, as Otto says, are purely numinous in character; they contain the elements of both joy and fear which Otto regards as characteristic of it and so link it with the love of nature. Ruskin writes:

Lastly, although there was no definite religious sentiment

mingled with it, there was a continual perception of Sanctity in the whole of nature, from the slightest thing to the vastest; an instinctive awe, mixed with delight; an indefinable thrill, such as we sometimes imagine to indicate the presence of a disembodied spirit. I could only feel this perfectly when I was alone; and then it would often make me shiver from head to foot with the joy and fear of it, when after being some time away from hills I first got to the shore of a mountain river, where the brown water circled among the pebbles, or when I first saw the swell of distant land against the sunset, or the first low broken wall, covered with mountain moss. I cannot in the least describe the feeling; but I do not think this is my fault, nor that of the English language, for I am afraid no feeling is describable. If we had to explain even the sense of bodily hunger to a person who had never felt it, we should be hard put to it for words; and the joy in nature seemed to me to come to a sort of heart-hunger, satisfied with the presence of a Great and Holy Spirit. . . . These feelings remained in their full intensity till I was eighteen or twenty, and then, as the reflective and practical power increased, and the "cares of this world" gained upon me, faded gradually away, in the manner described by Wordsworth in his "Intimations of Immortality".¹

How similar are the experiences of Richard Jefferies; but for him this sense of relationship with nature remained with him all his life to make his natural history writings a source of vivid joy to so many readers who have known something of the same elation. I quote from the final chapter of his remarkable *The Story of My Heart*.

I was not more than eighteen when an inner and esoteric meaning began to come to me from all the visible universe, and indefinable aspirations filled me. I found them in the grass fields, under the trees, on the hill-tops, at sunrise, and in the night. There was a deeper meaning everywhere. The sun burned with it, the broad front of morning beamed with it; a deep feeling entered me while gazing at the sky in the azure noon, and in the star-lit evening.

Or, as an example of this feeling, let me take a short extract from the opening paragraph of his *Wild Life in a Southern County*; he is describing an ancient earthwork on the downs:

¹*Modern Painters*, Popular Edition (George Allen), vol. III, p. 309.

The inner slope of the green fosse is inclined at an angle pleasant to recline on, with the head just below the edge, in the summer sunshine. A faint sound as of a sea heard in a dream—a sibilant “sish, sish”—passes along outside, dying away and coming again as a fresh wave of the wind rushes through the bennets and the dry grass. There are the happy hum of bees—who love the hills—as they speed by laden with their golden harvest, a drowsy warmth, and the delicious odour of wild thyme.

And now to Wordsworth. The love of nature is mixed with the wonder of it. It is this sense of wonder which is the source of inspiration of the true scientist as much as it is for the artist; those who lack it should rather be called technologists. To bring out this link I am going to quote from a scientist’s appreciation of Wordsworth, that by a zoologist, the late Professor Walter Garstang, which was published as a supplement to the scientific journal *Nature* with the title “Wordsworth’s Interpretation of Nature”¹. Here we find that in his youth Wordsworth had the same mixture of joy and fear that Ruskin felt.

Wordsworth’s childhood and youth [writes Garstang] were spent with unusual freedom amid the sights and sounds of Nature, among hills and dales . . . He revelled unchecked amid them all, “fostered alike by beauty and by fear.”

His delight in Nature was closely akin to that which has inspired many famous naturalists, and his early sympathy with science was so clearly indicated that a slight turn of Fortune’s wheel at the critical period of his life might well have made a naturalist of him instead of a poet. In 1785, when a happy schoolboy of fifteen, he eulogised from his Lakeland home:

those Elysian plains
Where, throned in gold, immortal Science reigns,
and where Truth teaches
the curious soul
To search the mystic cause of things
And follow Nature to her secret springs.

After recounting the period of scepticism and hopelessness which came to Wordsworth after his return from France at the time of the Revolution, Garstang writes:

In early youth he had caught the vision of the all-embracing unity of things, which was lost in France, and had to be regained

¹*Nature*, Vol. 117, Jan. 16, 1926.

before he could accomplish anything. He sought to get a true view of life as a whole, of man in relation to Nature, even as a part of Nature; and when he had acquired it, poetry was the expression of his attainment.

I will quote a few more brief passages from this essay of forty years ago in the hope that some of the present generation may turn back to it and read it in full.

Put briefly, the argument and illustrations detailed at great length in "The Prelude" amount to this, that man is not outside Nature—the universe of law and order—but by his subtlest fabric intimately bound up with it. Divorce him in youth from free contact with external Nature and you rob him of Nature's predetermined means of conferring upon him his share of her own grandeur, modesty and tranquillity. . . .

Nature, indeed, was to Wordsworth a universal symphony, a harmony of infinitely varied elements, appealing to man through every sense and gateway to the heart. Some of his smaller poems, and innumerable passages in his longer works are just so many phrases and passages isolated from the general symphony for special purposes. The musical analogy crops up incessantly:

No sound is uttered,—but a deep
And solemn harmony pervades
The hollow vale from steep to steep
And penetrates the glades.
A soft eye-music of slow-waving boughs.

After discussing the difference between the scientific and the Wordsworthian outlook Garstang says:

On the lower plane of cause and effect there is no antagonism between the two points of view, for Wordsworth's belief embraces in advance everything that science has established or may establish as to the orderly and interdependent character of the universe, whether viewed from without or from within. But on the higher plane, in the life of the emotions or spirit, the necessitarian chain simply drops away, and is seen as a mere substratum, conditioning results but not causing them. So long as imagination, or "faith", maintains itself as "feeling" in that upper level, science, at any rate, can interpose no obstacles to its flight.

Take, as a test, this slight vignette:

A humming bee, a little trickling rill,
A pair of falcons wheeling on the wing.

The matter-of-fact man will see in these two lines a mere catalogue of three disconnected and trivial things of no significance; but to the Nature-lover they call up, with superb artistry, a fragment of the great world-symphony—summer peace with its muted sounds and leisured motions. To appreciate that fragment, or, better still, its original, is to enter, through the gateway of emotion, a realm in which the proudest generalisations of science are simply irrelevant.

One final example of Garstang's appreciation of Wordsworth, (and this reminds us that he himself was a nature poet, as seen in his charming *Songs of the Birds*¹):

But best of all his smaller Nature-poems, because simply lyrical, is, to my mind, his poem on the greenfinch ("Green Linnet"), in which he makes delightful play with the bird's liveliness, protective colouring, and characteristic discontinuity of song:

My dazzled sight he oft deceives,
A brother of the dancing leaves
Then flits, and from the cottage eaves
Pours forth his song in gushes.

In fact, as the late Sir Walter Raleigh said, "the spirit of science has found no loftier or loyaller prophet than Wordsworth."

I am sure that the sense of a divine element in the universe becomes more real to countless lovers of the countryside in nature herself than in the formal religious practices based upon any dogmatic theology.

Let me next take the views of another scientist who is also an artist: Professor Sir Cyril Hinshelwood, O.M., past President of the Royal Society; they are expressed in his Eddington Memorial Lecture for 1961 under the title of *The Vision of Nature*². Perhaps only his close friends know that he paints, and paints very well. He writes as follows:

And now I come to a matter which seems to me to be of fundamental importance in the whole scheme of things. At a quite primitive stage of his development man reveals himself the artist.

¹John Lane, London, 1922. And there is his beautiful and moving *The Return to Oxford: A Memorial Lay* (privately published, Blackwell, Oxford, 1919).

²Cambridge University Press, 1961.

He makes representations of other men and of animals, and he seeks satisfaction by decorating himself and his surroundings. Artistic representation is, I believe, sometimes said to be coupled with the idea of magic and the desire to gain power over what is represented. Primitive man might be imagined to depict animals in the hope of favouring his success in the hunt. Whether or not this is so I do not know. It may well be: and is possibly of great importance in anthropology. But I feel convinced that it is far from the whole story. Men draw and paint, carve and model because they feel an inner need to do so. This inner need is an elaboration of the urge to explore, grasp and understand what is around them; to control these things, indeed, though not in the crude sense of exerting magic power, but in the deeper one of making them part of the self. (p. 11).

Regarding the anthropological significance of these early cave paintings I would draw attention to the views of the late Dr. R. R. Marett who, in his Gifford Lectures *Faith, Hope and Charity in Primitive Religion* (pp. 153-163), also saw in them something more profound than the supposed gaining of magical powers over the animals depicted. He points out that before the masterpieces could have been drawn on the rough wall surfaces in the dark with the aid of a flickering light, the artists must first have learnt to draw and paint in the light outside. The fact that they gave of their best and did not scamp their work, which was to lie hidden in the dark, indicates that they worked with a deep devotion. Let me now return to Sir Cyril Hinshelwood's lecture; the following passages are taken from its last five pages:

There is a profound human instinct to seek something personal behind the processes of nature: and people are led both by intellectual and by emotional paths to the contemplation of religious questions. In so far as men seek to fuse their own personal worlds with the impersonal element in the external world they are pursuing the vision of nature: in their desire for communion with the universal and personal they pursue what I suppose through the ages they have meant by the vision of God. . . .

The paths of art and poetry, science and religion are the means by which man grasps the universe, surrenders himself to it, identifies himself with it, loses himself in it, and, like the conquered absorbing their conquerors, strives to make it his in an ultimate identification of subject and object. This surely is

the meaning of the passion for knowledge, the love of art, and the need for personal relations. . . .

Scientists, artists, poets, theologians all form their images of the world. These are all incomplete, partial, relative, neither wholly true nor wholly false, but in any ultimate reality all must be comprehended, subsumed, transcended.

Whether an ultimate reality, timeless and absolute, is attainable, or even conceivable or whether there is only an endless evolution is a question on which I have nothing to say. But at least the former is not of this world in which life must be lived. And here something can indeed be said. To reject or ignore any of the aspects of the whole is to impoverish it: without poetry it loses colour, without art immediacy, and without science it loses structure and coherence. In the present age the scientific aspect is perhaps the occasion of the greatest and most adventurous activity: it presents the most vigorous growing-point. And the separation of the scientific and the humane is the falsest of false dichotomies, the disdain of science the most illiberal abstention from one of the greatest of human adventures. It is an adventure which brings with it control of external nature, and the betterment of the human lot, and by that alone it is sometimes justified. But consideration of means to ends must raise the question of the ends themselves. And to art and to science equally are applicable the words of Coleridge:

The primary imagination I hold to be the living Power and prime Agent of all human perception, and as a repetition in the finite mind of the eternal act of creation.

Here we are back at Coleridge and the platonic tradition.

I shall now, all too briefly, present the ideas on art and inspiration of the late Professor Alan Stephenson, F.R.S., the zoologist and painter who combined so remarkably the ideals and practice of both science and art. With the kind permission of his widow I wish to make better known his hitherto unpublished views by quoting from his posthumous and as yet unpublished book *A Scientist looks at Modern Art*. He writes:

I cannot persuade myself that there is anything to be gained by following the example of those writers who pretend that there is no such thing as beauty, or who explain it away by means of unconvincing definitions. Anyone capable of experiencing the vast and staggering volume of beauty in the world cannot adopt this course, which in the end explains away the writer

rather than the beauty, which is impregnable. It would be easier to believe that we can only *stand* beauty in small doses, that it is something terrific by which we should be stunned if we had too much of it, as by the song of a thrush in a small room; this idea has been given poetic form in the legend that man cannot see the face of God and live . . .

What is beauty? A glimpse of heaven? A painter can transmit beauty without knowing it: if he *feels* beauty, it will leap from his brush to his canvas. He may not realise at the time that he has succeeded in recording it, but later it will stream back to him from the canvas, and perhaps almost frighten him, because it is a cosmic force. . . .

When I speak of "a superhuman source", of "heaven" or the "powers of the universe", these words and phrases are not used in any religious sense, and imply no religious belief.

By religious belief he clearly means the creed of an orthodox theology, for a little later he writes:

When, therefore, I speak of "God", I do not mean the God of the churches. I use the word, as any secular writer may use it, in the following sense. There is a widespread human feeling that man is not the only intelligence in the universe, and that behind him there may be a creator or guiding personality; men have an *idea* of an intelligence outside themselves. This feeling or idea is a reality, whether or no it is justified; and it is more concise and apt to refer to the entity imagined as "God" than to describe it in any other form of words. . . .

We are familiar with some of the sources to which the results commonly attributed to inspiration can be traced. Thus it is well known that a painter, poet or musician may be "inspired" to high levels of achievement by the influence of a woman whom he admires; or that he may be similarly transported by an exciting sunset or a field of gentians. . . .

But this is hardly inspiration in the full sense of the word. In the extreme case, inspiration is the transmission through the mind and hand of an artist, of something which reaches him from a personal non-human source, in other words from "God". . . . for our present purpose we can only examine the question of inspiration in the light of the fact that *for all we know to the contrary* there may be a God capable of transmitting an idea through a human mind and hand. We need not quibble as to

the exact nature of such a God: for our argument we can think of him as a life force, an *élan vital*, a spirit of nature or any other conception which may suit our individual minds; but we can hardly think of him as lacking all personality, without making nonsense of any scheme we may work out.

Stephenson then goes on to describe the way painters work, how they have good days and bad days, and then how, when inspiration comes "the painter is conscious of power within him" and:

He can then do easily and unerringly things which on another day he can barely do with difficulty; or, even if he can do these things only with pain, *he can do them*. On such days it sometimes seems as if nothing can go wrong, as if any stroke he makes with his brush is at once the inevitable answer to his problem. In other words he acts *as if he were inspired* or guided by a mind surer than his own. In some cases a conscious feeling of inspiration may accompany such work. He may think "O Lord what a morning!" and feel that some outside power is painting a picture through the agency of his hand and eye, and that it can fail only in so far as he is himself an imperfect instrument. If he is satisfied with the painting when it is finished it is because he feels that it was painted through him from outside and has in fact very little to do with him. He may feel that no work succeeds unless he has been able to submit his mind to this flowing of the creative force through it, a feeling which may be expressed symbolically in such words as "Except the Lord build the house, they labour in vain that build it".

We have heard him say, concerning the feeling of something beyond the self which inspires the artist, that "this feeling or idea is a reality, whether or not it is justified; and it is more concise and apt to refer to the entity imagined as 'God' than to describe it in any any other form of words." Whether or not this feeling is justified, that indeed is the question. Is it, or is it not, an entirely psychological effect? That is a question which, after many more facts have been gathered, the future science of natural theology should be able to answer. An important step in this direction is now being made by the experimental method within psychology itself. I can only very briefly call attention to this—to some no doubt surprising—scientific approach to the so-called "subjective".

The study I refer to is one described by Professor Sir Cyril Burt

in "The Psychology of Value", in the *British Journal of Statistical Psychology*¹. He opens with an amusing reference to the title of a lecture by Oscar Wilde: "Are the Critics of *Hamlet* Really Mad or Only Pretending?" and goes on to ask, in the same spirit, "Are the psychologists who criticize the notion of moral value really as unprincipled as they sound, or are they only pretending?" After pointing out the widespread belief that the modern followers of Freud and Watson are largely responsible for the marked decline in moral standards among the rising generation, he says that as scientists we must be "concerned primarily with the *truth* of the alternative views, rather than their possible consequences . . .", and that "in its present phase the controversy had its origin in the sphere not of ethics but of aesthetics." Towards a solution of this problem Sir Cyril and his fellow workers made experimental comparisons of aesthetic appreciation. Whilst the article is largely a reply to their critics, he makes a strong case for the scientific study of value and summarizes the results of this remarkable pioneer investigation; it is nothing less than an extension of the scientific method into a realm which for so long has been thought to be closed to this objective approach.

Psychologists and philosophers have often tried to reduce what we call "values" into other terms—for example "beauty" to that which gives pleasure, "goodness" to the greatest happiness for the greatest number and so on; after examining such proposals he shows that they all collapse and that we must conclude that the concept value is unique and irreducible. It would seem to follow that "value" and its different forms, goodness, beauty and truth, are logically primitive and therefore indefinable. "In that respect" he says "they resemble other relatively simple qualities that are directly experienced such as pleasure and pain, yellow or pink, the scent of a rose or the flavour of a vintage port." Although we cannot define them we can, in different instances, say whether they are present in differing degrees or absent; and "this means that the appreciation of value implies a level of ability that is capable of apprehending relations." Now he has not been content just to remain a theorist; it was to throw light on these issues that he undertook these experimental studies to demonstrate the truth or falsity of the propositions. He carries science into philosophy, just as we hope to see it carried into theology.

His experiments were based upon a wide variety of material and a representative panel of subjects (just over 200 men and women)

¹Vol. 16, pp. 59-104, 1963.

from all walks of life; they involved not only quantitative methods such as paired comparisons and ranking, but also a questionnaire. His results confirm the view that value and differences in value are things that people directly apprehend. Let me give an example, but first I should explain that he divided his subjects into two groups: the more sophisticated (or "S" group) who were highly educated and might be influenced by their more specialized knowledge and theories, and the other, more ordinary, persons (or "O" group). I will now give his summary of one type of experiment:

I then show the subject two cards of similar size—one a coloured reproduction of the face of the angel in the London version of the *Virgin of the Rocks*, the other a coloured and rather vulgar postcard of an ill-drawn and intentionally repulsive female face. With these I ask first (i) what difference the subject notices. Sooner or later nearly all say that the former is "more beautiful" or the latter "uglier". I then continue with much the same questions as before. [(ii) "How do you know?" (iii) "Do you think the difference is there independently of your noticing it? Would it still exist if no one were in the room, or if all living creatures were wiped out?" (iv) "Does the difference imply a difference of some specific quality or characteristic possessed by the two objects, and if so what?" (v) "Does this underlying characteristic also exist independently of your noticing it?"] In both groups nearly everyone says that he "just sees" the difference. A few in the S-group explain that they find the former "more pleasing"; one or two say that it comes closer to their ideal, or that it is sexually more attractive, sometimes adding that the other is more amusing: these are the nearest approaches to any suggestion that the judgement was based on feeling rather than on direct perception, and they are exceptional. For the most part the replies with these two cards are given much more promptly than the replies to the corresponding questions about size. Practically all the members of the O-group say that they consider the *difference* to exist even when it is not being observed. A few find it more difficult to say whether the *beauty* existed when not observed. In the S-group there is a marked tendency to discuss the matter as a theoretical problem.

He then tabulates the results, the figures being percentages of the total number of subjects in each group:

<i>Comparison of Pictures</i>	O-group	S-group
i Differences	95	97
ii How known		
Direct perception	90	81
Inference	0	4
Emotional or affective	3	6
iii Differences independent of recognition?	96	73
iv Beauty independent of recognition		
Yes	81	72
No	2	11
Doubtful	10	14

He now explains that:

... the mode of apprehension seems to resemble that of Gestalt-like qualities such as shape or order, rather than that of so-called secondary qualities such as colour, sound, or smell. Their judgements about beauty, and still more their judgements about goodness, they all, with a few exceptions, regard as statements of fact—assertions whose truth they would defend against any who ventured to contradict them.

Beauty thus appears to be a quality which we discover in certain objects and goodness a quality which we discern in certain actions; they are not unauthorized additions that we somehow impose on, or project into, the objects or the actions, as a result of our own private feelings or desires. It follows that the experience of value is primarily a process of a cognitive type, though, like all cognitive processes, it may be accompanied by affective or emotional processes, or be influenced by conative or appetitive tendencies, or modified by personal associations.

He goes on to point out that, whilst there are often marked individual differences in men's judgements about beauty and goodness, the correlations between rank-orders obtainable from different individuals are almost invariably positive and much larger than usually assumed: the amount of agreement outweighs that of disagreement. If we could accept these results as they stand the natural inference would be, as he says, "that value, like shape and differences in shape, exists independently of human recognition and in that sense is genuinely objective, or at any rate more objective than subjective." Whilst he admits that the evidence is by no means con-

clusive, being partly verbal as well as observational, it presents a strong *prima facie* case and "the burden of rebutting it is thus shifted on to the backs of those who want to discard it."

Among his experiments Sir Cyril Burt also included one on "experiences of the sublime"—asking his subjects what was the most impressive experience they had had of beauty and the like. Here is the experimental method approaching the numinous or the mystical; about it I can only give one final quotation:

Quite unexpectedly, this turned out to be by far the richest of all the fields of inquiry to which these "axiological studies" have led. Here only the briefest summary is possible. Taken as they stand, the figures obtained indicate that experiences of this type are much more frequent than is generally supposed. At first sight they would seem to be commoner among the S-group than among the O-group; but that may be due partly to the fact that persons in the O-group more rarely find themselves in situations that are apt to trigger off such experiences, partly to their inability to recognize or put their experiences into words, and partly to a fear that they might be thought either "slightly pathological" or "unduly superstitious" or (as a Scottish girl put it) "a wee bit fey". I found, as Galton did, that at the beginning of the interview, the person questioned would often return a slightly embarrassed denial, but, after his reticence had been overcome, he would later confess: "Well, there was one curious experience . . ."

I will end my lecture by referring to another important addition to this natural history: Marghanita Laski's *Ecstasy: a study of some secular and religious experiences*. It is particularly valuable because it comes to us from the hands of an atheist¹; it is a systematic study of human experiences entirely from a rationalistic standpoint. She draws upon three separate sources of material. Firstly from the answers given to a questionnaire she issued to some sixty friends and acquaintances who were willing to answer such questions as: Do you know a sensation of transcendent ecstasy? How would you describe it? What has induced it in you? How many times have you felt it and so on. Secondly she sought material from a number of literary sources: she was looking, she said, "for experiences superficially similar to those

¹I had originally written "agnostic", but on showing my draft to Miss Laski she asked me to change it to "atheist" as more truly expressing her position: "one", she says, "that has bearing on my conclusions and on which my conclusions bear."

of the questionnaire group which their authors had thought worth communicating to the public". And thirdly she collected examples from books about religious experience. The results of her survey, with the appendices of details of analysis, fill a volume of over 500 pages.

The reader must go to this original volume to get any idea of the scope of her studies; I am merely calling attention to them. She divides up her records of ecstatic experiences into five main categories. (1) *The feeling of loss*: i.e. loss of time, of place, of worldliness, of self, of sin and so forth. (2) *The feeling of gain*: i.e. gain of a new life, of joy, of salvation, of glory, of new knowledge, etc. (3) *Ineffability*: experiences which the person finds impossible to put into words at all. (4) *Quasi-physical feelings*: i.e. reference to sensations, suggesting physical feelings, which may accompany ecstatic experiences, such as floating sensations, a feeling of swelling up, an impression of a shining light and so on. (5) *Feelings of intensity or withdrawal*: an intensity experience is a feeling of a "winding up", an accumulation of force to the point at which it is let go, whereas withdrawal is the opposite—an ecstatic condition reached "not by accumulation but by subtraction", a feeling of withdrawal of force and energy. She analyses the records of experiences from her three separate sources of material—her questionnaire group (Group Q), her literary (Group L) and her religious examples (Group R)—under these five headings. She now estimates the percentage proportions occupied by each of the five categories of feelings as found in the analyses of all the records of the experiences within each of these three groups Q, L and R. What is indeed remarkable is the degree of similarity between these percentage proportions in each of the three groups. Her summary table, which I reproduce, shows this very well.

	Group Q	Group L	Group R
	%	%	%
Feelings of loss	17.1	23.1	22.8
Feelings of gain	47.8	43.0	44.9
Ineffability	1.4	1.8	4.2
Quasi-physical feelings	23.7	25.4	23.4
Feelings of intensity or withdrawal	10.0	6.6	4.8
	<hr/> 100.0 <hr/>	<hr/> 99.9 <hr/>	<hr/> 100.1 <hr/>

(The items do not add to 100 precisely because of rounding.)

Such results, with the examples of graphs that I reproduce in the last lecture (p. 91) illustrate the emergence of the new science from the realm of just descriptive natural history. It is possible to treat the relative occurrence of such "subjective" elements in quantitative terms.

Marghanita Laski's studies make it quite clear that ecstatic states similar to those felt in mysticism are not entirely confined to experiences relating to what is generally understood by the term religion. We have already seen that the loveliness of nature can itself give rise to such feelings without them being associated with a distinctive theistic belief; and they can also be produced by the sudden realization of some new scientific insight. She quotes a saying by Einstein as follows:

The most beautiful emotion we can experience is the mystical. It is the sower of all true art and science. He to whom this emotion is a stranger . . . is as good as dead. To know that what is impenetrable to us really exists, manifesting itself as the highest wisdom and the most radiant beauty, which our dull faculties can comprehend only in their most primitive forms—this knowledge, this feeling, is at the centre of true religiousness. In this sense, and in this sense only, I belong to the ranks of devoutly religious men.

Arthur Koestler in his *The Act of Creation* quotes a remarkable passage from a speech made by Pasteur when he had been elected a member of the Académie Française and was replying to a welcoming oration:

I see everywhere in the world the inevitable expression of the concept of infinity. It establishes in the depths of our hearts a belief in the supernatural. The idea of God is nothing more than one form of the idea of infinity. So long as the mystery of the infinite weighs on the human mind, so long will temples be raised to the cult of the infinite, whether God be called Brahmah, Allah, Jehovah or Jesus. . . . The Greeks understood the mysterious power of the hidden side of things. They bequeathed to us one of the most beautiful words in our language—the word "enthusiasm"—*en theos*—a god within. The grandeur of human actions is measured by the inspiration from which they spring. Happy is he who bears a god within—an ideal of beauty and who obeys it, an ideal of art, of science. All are lighted by reflection from the infinite.

What are Miss Laski's conclusions? From among them I quote the following:

But I do not believe that any explanations of these experiences can be satisfactory if they suggest that ecstasies are *only* this or *only* that—only a phenomenon of repressed sexuality or only a concomitant of some or other morbid condition. Certainly convictions are an insufficient substitute for evidence, but both people's convictions of the value of these experiences and their substantial influence on outlook and language persuade me that these are of some evidential value in justifying the conclusion that ecstatic experiences must be treated as important outside religious contexts, as having important effects on people's mental and physical well-being, on their aesthetic preferences, their creativity, their beliefs and philosophies, and on their conduct.

I do not think it sensible to ignore, as most rationalists have done, ecstatic experiences and the emotions and ideas to which they give rise. To ignore or to deny the importance of ecstatic experiences is to leave to the irrational the interpretation of what many people believe to be of supreme value. It is, I think, significant that we have no neutral adjective to distinguish the range of emotions, values, moral compulsions, felt truths that arise from ecstatic experience. *Spiritual* implies acceptance of pre-suppositions rejected by rationalists, and those who reject such pre-suppositions have sought rather to deny importance to ecstatic experiences than to examine them on the basis of their own pre-suppositions and to supply a vocabulary in which such examinations could be made. . . .

I do not believe that to seek a rational explanation of these experiences is in any way to denigrate them, but rather that a rational explanation may prove at least as awe-inspiring as earlier interpretations. . . . I should be content and happy to believe that ecstatic experiences are wholly human experiences; that what men have worshipped since ecstatic experiences were known to them was their own creative and generalizing capacity, and that the god they sometimes believed they had perceived in these experiences was indeed the *logos*.

I had wondered in what sense she used the word *logos*. Apart from the appendices it is the last, and I believe the most important, word in the book. It was clear that she could not mean by it the Hellenistic Christian concept of the fourth gospel; nor could she use it in the way

the Stoics did, of the principle of life or reason working in dead matter, or as Philo did, attaching it to Platonism, as another name for Plato's idea of the God as a creative activity. What the concept of the *logos* really means has always been a puzzle. I have now written to Miss Laski to enquire what significance she intended to attach to it. "By *logos*" she writes, "I mean 'word,' that is the ability to communicate consistently, both to ourselves and others, our generalisations. I suppose that the mystical accretions of *logos* derive from and come down to (or perhaps soar up to) just this."

I believe that the word *logos* can indeed mean the divine flame, or in other words the *en theos*, the god within, as we have just recalled Pasteur using it. It is with the very nature of this god within and its relation to the universe without that our natural theology must deal.

LECTURE VI

PSYCHOLOGY AND RELIGION

No branch of science has had a greater influence upon man's religious outlook than psychology, and particularly the psycho-analytical branch of the Freudian school. The impact of this line of thought upon the philosophy of religion has been more powerful—and to many minds more destructive even—than the concept of Darwinian evolution. The force of the collision lies in the fact that many Freudians fully recognize the reality of the idea of, or the feeling that we have contact with, some higher element above the normal self, a personal-like element which some may like to call God; they indeed point to it, but claim that it is something else—something not distinct from, but a part of, our own mental make up.

Not all followers of Freud accept his view that the concept of the super-ego, as he calls it, explains the whole of religious experience; there are both psychologists and theologians who stress the importance of his doctrines in the understanding of both human personality and the development of theology, without by any means swallowing all of his more speculative flights regarding the actual nature of religion. The psycho-analytical field is, of course, divided into rival schools: in addition to the Freudians there are, among others, the followers of Jung and Adler who were originally disciples of Freud but broke away in the early days to develop their own separate lines of interpreting the nature of the subconscious mind. The Jungians, in particular, are the more sympathetic to a religious outlook.

The concept of the subconscious or unconscious mind did not originate with Freud as many who are not psychologists seem inclined to imagine; before him there was much talk of what F. W. H. Myers and William James had called the subliminal mind. It is well, I think, that we should look for a moment at these earlier ideas; they may not altogether have lost their interest and perhaps their importance for us. Myers developed the idea of the subliminal mind during his consideration of the phenomena which he and the other pioneers were

investigating in the early days of the Society for Psychical Research; he discusses it particularly in that large volume *Human Personality and its Survival of Bodily Death* (1906) which he had completed shortly before he died in 1901. He speaks of a threshold (*limen*) of consciousness, a level above which sensation or thought must rise before it can enter into our conscious life. He then says:

I propose to extend the meaning of the term, so as to make it cover *all* that takes place beneath the ordinary threshold, or say, if preferred, outside the ordinary margin of consciousness; —not only those faint stimulations, whose very faintness keeps them submerged, but much else, which psychology as yet scarcely recognises; sensations, thoughts, emotions, which may be strong, definite, and independent, but which, by the original constitution of our being, seldom emerge into that *supraliminal* current of consciousness which we habitually identify with *ourselves*. Perceiving (as this book will try to show) that these submerged thoughts and emotions possess the characteristics which we associate with conscious life, I feel bound to speak of a *subliminal* or *ultra-marginal consciousness*,—a consciousness which we shall see, for instance, uttering or writing sentences quite as complex and coherent as the supraliminal consciousness could make them. [He is here referring to cases of automatic writing.] Perceiving further, that this conscious life, beneath the threshold or beyond the margin, seems to be no discontinuous or intermittent thing; that not only are these isolated subliminal processes comparable with isolated supraliminal processes (as when a problem is solved by some unknown procedure in a dream), but that there also is a continuous subliminal chain of memory (or more chains than one) involving just that kind of individual and persistent revival of old impressions, and response to new ones, which we commonly call a Self, —I find it permissible and convenient to speak of subliminal Selves, or more briefly of a subliminal Self.

Myers, by analogy, likened the human mental faculty to the spectrum, comparing consciousness to the visible part of it although he warns us that we must not really think of it in linear form; it would be a spectrum, he said, “whose red rays begin where muscular control and organic sensation begin and whose violet rays fade away at a point where man’s highest strain of thought or imagination merges into reverie and ecstasy.”

The idea of the subconscious or the subliminal consciousness as used by William James was perhaps more widely known than that of Myers. Any discussion of the psychology of religion should begin with some account of the work of Starbuck and James; I have already, however, dealt at some length with their pioneer contributions to the natural history of religion in lecture iv. Let us see how James thought of this subliminal region and its possible relation to religion:

If the word "subliminal" is offensive to any of you, as smelling too much of psychical research or other aberrations, call it by any other name you please, to distinguish it from the level of full sunlit consciousness. Call this latter the A-region of personality, if you care to, and call the other the B-region. The B-region, then, is obviously the larger part of each of us, for it is the abode of everything that is latent and the reservoir of everything that passes unrecorded or unobserved. It contains, for example, such things as all our momentarily inactive memories, and it harbours the springs of all our obscurely motivated passions, impulses, likes, dislikes, and prejudices. Our intuitions, hypotheses, fancies, superstitions, persuasions, convictions, and in general all our non-rational operations, come from it. It is the source of our dreams, and apparently they may return to it. In it arise whatever mystical experiences we may have, and our automatisms, sensory or motor; our life in hypnotic and "hypnoid" conditions, if we are subjects to such conditions; our delusions, fixed ideas, and hysterical accidents, if we are hysteric subjects; our supra-normal cognitions, if such there be, and if we are telepathic subjects. It is also the fountain-head of much that feeds our religion. In persons deep in the religious life, as we have now abundantly seen,—and this is my conclusion,—the door into this region seems unusually wide open; at any rate, experiences making their entrance through that door have had emphatic influence in shaping religious history¹.

Whilst his ideas regarding the significance of the subconscious are very different from those of Freud, and he does not, as does Freud, discuss its origin, we see that he does realize its great extent and its immense importance in influencing our life. I will give one more quotation from James to show how, among his final conclusions, he relates the subconscious to religious experience:

Let me then propose, as an hypothesis, that whatever it may

¹*The Varieties of Religious Experience*, 1902, pp. 483-4.

be on its *farther* side, the "more" with which in religious experience we feel ourselves connected is on its *hither* side the subconscious continuation of our conscious life. Starting thus with a recognized psychological fact as our basis, we seem to preserve a contact with "science" which the ordinary theologian lacks. At the same time the theologian's contention that the religious man is moved by an external power is vindicated, for it is one of the peculiarities of invasions from the subconscious region to take on objective appearances, and to suggest to the Subject an external control. In the religious life the control is felt as "higher"; but since on our hypothesis it is primarily the higher faculties of our own hidden mind which are controlling, the sense of union with the power beyond us is a sense of something, not merely apparently, but literally true.¹

The importance of James's position in the psychology of religion in the pre-Freudian days is well summarised by the late Professor Grensted:

The theory of a "threshold of consciousness", applied by James to the facts of religious conversion, with its pattern of conflict, crisis, and resultant integration, gave the first impetus to a possible explanation of the whole structure of religion, in its external and observed forms, on psychological lines. And for the time being the new explanation swept the field. It seemed a comparatively simple matter to explain the conversion of St. Paul or St. Augustine as the emergence into consciousness of the results of a period of "unconscious cerebration" or the maturation of a subliminal system of a strongly emotional character. Commentaries upon the Book of Acts were at once filled with explanations showing how the emotional influences associated with the martyrdom of St. Stephen had developed in the subconscious levels of St. Paul's mind until they at last broke through violently to produce the sudden conversion experience on the Damascus road. It all seemed simple enough. The full complexity of the process, which the development of Freud's analytic theories were to reveal, did not then appear².

Freud's conception of the subconscious is, indeed, very different from that of James and he is certainly the outstanding figure in the revelation of its importance for an understanding of our mental make up; he was the great explorer who discovered so much of its

¹*ibid.*, pp. 512-13.

²*The Psychology of Religion*, 1952, pp. 52-3.

nature by the techniques he initiated. From the study of mental patients, particularly those suffering from hysteria, he developed his hypotheses, and then, by putting them to the test, effected cures which demonstrated their validity.

I am not a qualified psychologist and it would be quite wrong of me to appear to lay down the law as to which particular school of psycho-analysis is nearest the truth. The object of my course is to outline the scope of a future science of natural theology as I see it: looking at all the different aspects as a naturalist exploring a whole country. Here I am doing no more than stressing the importance of these psycho-analytical studies for our subject. It is for the more specialised, scientific theologians of the future to decide just which parts of the current theory are relevant to an understanding of religion. I shall presently explain, for what it is worth, just why I believe the equation of the Freudian super-ego with the idea of Divinity cannot be complete.

I have prepared these lectures, as I believe was Lord Gifford's wish, for a general audience. In making my psychological review I must inevitably be going over ground well known to many of you, yet for others who have not followed the development of psycho-analytical theory it is essential that I should sketch such an outline. I must ask all those who will be familiar with what I shall say to bear with me for a little while.

In the mind we can distinguish the conscious, the preconscious and the unconscious (or subconscious). Whilst we are not normally conscious of the preconscious and so in that respect it is unconscious, it differs from the true unconscious in an important respect. Although we are not at the moment aware of the contents of the preconscious, we can at once call them to mind should we direct our attention to them; for example when we are reading we may be quite oblivious of the ticking of the clock or of the slight discomfort of some ill-fitting clothing, yet they can instantly come into full consciousness as soon as we want to notice them. With the true unconscious, or subconscious, it is different; we may know the name of an acquaintance quite well, yet, if we suddenly try to recall it, it may refuse to appear for us at once, but come into our mind perhaps an hour or so later.

It is with this *subconscious* and its divisions that we are largely concerned. However, before turning to these, I should say something of consciousness, for it is the tendency to experience different conscious states that determine a person's disposition and so his character or

personality, which in turn may have much to do with his religious outlook. The actual conscious process can, of course, be split into its three well-known aspects:

Cognition: our having knowledge or awareness of an object which may be either an actual material body or an abstract idea;

Feeling: such as a feeling, say, of pleasure or fear, which might be better called an *affective state* so as not to confuse it with an organic sensation such as "feeling" tired or hungry; and

Conation: the element of purposive action.

We continually see the three elements linked in a mental chain: for example we notice some evidence of say carelessness or cruelty, it makes us feel angry and we decide on some action, say, to remonstrate with the person concerned.

Our character or personality depends upon our sentiments, and our affective, or conative dispositions. We can define a disposition as a tendency to experience a particular type of conscious state in certain circumstances: for example that of being angry in the example just given. Our sentiments are our acquired affective dispositions in relation to particular objects or actions—as in being always made angry by carelessness or cruelty. We are not apparently born with distinct sentiments, they are not innate, like an instinct, but must be developed as a result of our experience. The late Professor Rex Knight and Mrs. Margaret Knight have, in their *A Modern Introduction to Psychology*, with their admirable economy of words, stressed the importance of sentiments in the formation of character:

Sentiments [they say] are, in McDougall's phrase, the chief organizers of our affective and conative life. Without permanent sentiments, we should be at the mercy of every transient and momentary impulse. But the existence of firmly-established interests and attachments and loyalties often leads us to resist the immediate promptings of instinct for the sake of more permanent satisfactions.

Individual differences in character derive largely from the sentiments: at the instinctive level we are all very much alike. The growth of personality consists, to a considerable extent, in the growth of the dominant sentiments. Every adult has a variety of sentiments, but usually there is one, or a small number, of powerful dominant sentiments, which form, as it were, a nucleus round which the minor sentiments are organised. In

one the dominant sentiment may be personal ambition; in another, love of home and family; in another, devotion to scientific research; in another, desire for social justice; in another, love of sport and country life—and the list could be prolonged indefinitely. When we know what a man's dominant sentiments are, we know a great deal about his character.

They end their chapter on sentiments "by way of summary and conclusion" with a quotation from McDougall which I should like to recall:

The growth of the sentiments is of the utmost importance for the character and conduct of individuals and of societies; it is the organisation of the affective and conative life. In the absence of sentiments our emotional life would be a mere chaos, without order, consistency, or continuity of any kind; and all our social relations and conduct, being based on the emotions and their impulses, would be correspondingly chaotic, unpredictable and unstable. It is only through the systematic organisation of the emotional dispositions in sentiments that the volitional control of the immediate promptings of the emotions is rendered possible. Again, our judgments of value and of merit are rooted in our sentiments; and our moral principles have the same source, for they are formed by our judgments of moral value.

Thus we see that it is the difference in dispositions and sentiments that make the differences in personality. It is psycho-analysis, particularly the pioneer work of Jung, which has enabled us to study the basic differences between distinct types of personality. It is to him, of course, we owe the terms "extravert" and "introvert". We may note, however, as was pointed out by Professor Grensted,¹ that the distinction between these two types is very similar to that made much earlier by William James in his *Varieties of Religious Experience* when he contrasted the qualities found in the two markedly different kinds of religious person which he called the "healthy minded" and the "sick soul", or the "once born" and the "twice born". Jung, however, developed the study of the extravert and introvert types very much further than did James, and considered them not only in a religious context, but in all aspects of life. He has been followed by others who link these mental types with differences in bodily structure: such as Kretschmer and, upon a rather different basis, Sheldon. There are then the so-called "dimensions" of personality, discussed by Professor

¹*The Psychology of Religion* (1952), p. 60.

Eysenck and his co-workers, which carry us into further distinctions.

They are showing us that, whilst sentiments themselves are not innate, the tendencies towards this or that type of personality may perhaps be linked with inherited physical types.

But now let us turn back to the unconscious or the subconscious and the great contributions by Freud. By his study of mental patients he realized that our unconscious minds are full of instinctive impulses which we have repressed so that they no longer enter into our conscious thoughts; they do not usually disappear however but remain to influence our lives in unrecognized and unwelcome ways. *Suppression*, as we shall see in a moment, is different from *repression*, but the continued suppression of powerful impulses may lead to repression. We are, of course, continually suppressing impulses of a minor kind, which we feel are at variance with our social obligations; we may long to cut short a lengthy and boring story related by a friend, but feel it impolite to do so, or we are tempted to take the last peach off the plate but refrain when we know it is being kept for some invalid. Such suppression is harmless. There are, however, more serious impulses which we can only deal with in one of two ways: one beneficial and the other the reverse. We may sublimate the psychic energy concerned—say a sexual impulse—into new channels such as art, athletics, social work and so on. Freud believed that civilization is entirely the result of this very process: the conversion by sublimation of primitive impulses towards higher more socially valuable goals. We may well agree with him that this is indeed a large part of the process, but it is not all of it, I think, as I shall presently suggest. If we fail to sublimate an unwelcome impulse, and continue to suppress it by refusing to allow it to come into consciousness—refusing to admit its existence—then such continued suppression may lead to what Freud distinguished as repression: a state in which it is held in the unconscious without our being aware of it. Whilst it is held there unrealized it may yet continue to produce effects upon our life in giving rise to curious and apparently inadvertent behaviour. Such a repression, known as a *complex*, may give rise to feelings of guilt; it is usually covering up a feeling of shame or self reproach. Here Freud shows us the psychological explanation of the sense of sin that plays such an important part in the religion of many people.

The unconscious may reveal itself in two chief ways. It may influence our conduct by what are called *rationalisations*: chains of argument, often specious, invented by our minds to justify our per-

forming an act, or holding a belief, which is actually motivated by some quite other, hidden, repressed and unconscious cause. Or the unconscious may appear to us in dreams, which Freud regarded as the disguised symbolic representations of its conflicting elements or neuroses. It must be obvious how likely it is that the rationalisation process may be at work when we frame our theological theories; we should recognize this and always be on our guard against it.

We may now turn to Freud's views on the relation of psycho-analysis to religion. This essentially concerns the *development* of the subconscious mind in the life of the individual. He supposed that in earliest childhood there is no division into the conscious and the subconscious, but that the latter is quickly formed as the babe is forbidden to do this or that. The infant is looked upon as an out and out egoist, full of animal impulses which it strives to satisfy; one by one these are curbed by the discipline of training and driven by such repression into this hidden subconscious part of the mind. Originally Freud regarded the mind as made up essentially of these two elements, the conscious and the subconscious; and he thought that the repressing "censor"—keeping the more ugly impulses locked away in the subconscious—must be a part of the conscious mind. As his work progressed, however, he began to realize that this "censor" could hardly be considered entirely as a part of the adult conscious mind because when its action is revealed by psycho-analysis it is often proved to be of quite a childish kind. For example when some of these hidden impulses are brought back into consciousness, as by his method of dream interpretation, it is often found that they are really only shocking when judged by nursery standards, and that the adult mind may merely be amused at them.

Freud now revised his conception of the mind and divided it into three, instead of two, main elements; these he terms the Ego, the Super-ego and the Id. The Ego is the adult rational conscious mind—the self that we are aware of; the Id is the unconscious mass of repressed impulses, mainly infantile, but with subsequent additions, and the Super-ego, which, taking the place of the censor in his earlier formulation, is the new element in his revised scheme. The Super-ego is partly unconscious like the Id, and like it too, it is a survival from infancy. It is the ruthless repressor acting, not according to a reasoned system of morality thought out by the mind, but upon a crude and often highly irrational code which was laid down in childhood according to the discipline imposed by the parents or adults in charge; such a

code was one simply accepted without being understood. In Freud's words¹:

It is in the course of our development that external compulsion is gradually internalized, in that a special mental function, man's super-ego, takes it under its jurisdiction. Every child presents to us the model of this transformation; it is only by that means that it becomes a moral and social being. This strengthening of the super-ego is a highly valuable psychological possession of culture. Those people in whom it has taken place, from being the foes of culture, become its supporters.

It is here that Professor Waddington's views developed in his book *The Ethical Animal* are so interesting. We discussed them in our second lecture in this series (p. 46). Not only does he suggest that in the development of culture the child has been turned into one who is inclined to believe what it is told by his elders, but that this super-ego of Freud's has been incorporated into the mental make-up of man by the selective forces of the same evolutionary process. Some people seem to equate the Super-ego entirely with conscience, but, as we have just seen, it is not completely like our *conscious* conscience; it is in part an unconscious childish conscience.

The most crucial stage in a child's psychological development is thought by many to be that of infancy—*i.e.* up to six or seven years of age—a period which ends according to Freud with the resolution of what he called the Oedipus complex upon which he lays so much stress. For those who have not studied the subject it comes as a surprise to learn how great a part sex is said to have been found to play in this early period; it, no doubt in part, appears surprising at first sight because these sexual impulses (if as strong as Freud and his followers suppose) pass into a period of latency and remain inactive until they emerge again at the onset of puberty as if they had appeared for the first time. The Freudian psychologists tell us that in this period of infancy there is a highly emotional erotic life with feelings of love, jealousy and hate as powerful almost as those of later adult life. For a time, they tell us, the child wants with a deep intensity the sole attention of the parent of the opposite sex: a boy wants his mother entirely to himself and wishes the father disposed of, and a girl similarly wants her father; and for a period, they say, the child will jealously hate the opposite parent, but then the mood will pass, and give way to fear of retaliation and a desire to propitiate the offended one. Such

¹*The Future of an Illusion*, p. 18.

is the nature of what they call the Oedipus complex. As the child gets older, and the sexual impulse passes into latency, feelings of guilt and remorse are likely to develop with a wish for forgiveness. Now clearly this *may* be very important, but we must be on our guard lest this supposed extreme sexuality has been exaggerated; there is indeed evidence which I shall discuss presently that suggests that this may be so.

The Freudians, in their interpretation of this early phase of life, claim to discover an extraordinary development of ideas in the child mind which some of us may find almost incredible; particularly it is said that the boy commonly gets the idea that the father wants *physically* to destroy his power to love the mother, that is actually to castrate him. There are also said to be mixed up with it other strains, including narcissism or self-love, and more particularly those sexual phases which may form abnormal deviations in later life: sadism, *i.e.* obtaining of satisfaction in the infliction of pain, and its opposite masochism, the curious pleasure in experiencing pain. I must mention these ideas because it is from them that some would claim to derive a great deal of the subsequent religious feelings which develop in later life. For those who have not followed the trends of Freudian thought, and who may not have realized the emphasis which is placed on these alleged early sexual feelings, I will quote a brief summary of the supposed resolution of the Oedipus complex from *Freud and Christianity* by the Rev. Dr. R. S. Lee. It is appropriate that I should take the account from Dr. Lee because I shall presently be showing the importance he attaches to the Freudian ideas for the interpretation of certain theological doctrines:

The boy is placed in an unbearable situation. His love makes him desire the mother, but if he gets her he thereby encounters the destructive wrath of the father who will castrate him. He has to choose therefore between his sensual longing for the mother and his fear of castration. The self-love wins, and the boy renounces his desires for the mother. He is enabled to do this by a process of great importance. First of all he identifies himself with his father. This he is able to do because he loves him as well as hating him, and because the father does what he himself wants to do—sleeps with the mother. He then introjects the father image into himself, that is, he divides up his mind into two parts, one part being his own self and its desires, and the other the identification of himself with the father. He then

accepts the commands which (he imagines) the father image gives him, and so he is enabled to renounce the sensual desires he feels towards the mother. He represses them and his love towards her loses its sensual quality, becomes "aim-inhibited" and so transformed into tender affection which does not conflict with the now recognised rights of the father, and so does not arouse his wrath.¹

This, I think, can be regarded as a fair summary of the orthodox Freudian view of the resolution of the so-called Oedipus complex by the boy identifying himself with the father; it is held by the Freudians to be the main factor in bringing about the tripartite division of the mind we have briefly discussed. I will only remark, in passing, that we seem to hear a great deal about the boy and his father, but much less regarding a daughter (and the corresponding Electra complex). The father-identification appears as the source of the super-ego. It combines the authority of the father, now built into the mind as the censoring power, with the provision of an ideal to be striven for; the boy wants to be strong and wise like his father. The person's reasoning ego, his real self, is *between* the super-ego and the id; on the one hand it is obedient to the super-ego and on the other seeks to carry out in the world such impulses from the id as will be allowed by the super-ego's censorship. The authority of the super-ego provides what has been called the "categorical imperative", the "right" of duty; it becomes the conscience. Now this super-ego, this authoritative conscience, becomes in part unconscious and in part conscious. As we have already seen, it has components derived from early childish nursery standards which lie buried only to be recalled by psycho-analysis; it has in addition, however, a whole collection of moral standards which are added to it in subsequent development, assimilated to the early ideal—new standards derived from the home, school, church, national patriotism and so forth.

Before we discuss the validity of these ideas any further we should see how Freud applied them to religion. He did so in two books: *Totem and Taboo* (1913) and *The Future of an Illusion* (1928). In the former, he sought to explain the idea of the internalised father image as an evolutionary product, arising in the beginnings of human culture. He envisages the beginnings of such tribal life as a group of women and young males ruled over by a despotic male—the father of the tribe. The males were killed or driven off by the father if they should

¹*Freud and Christianity*, p. 71.

doctrine of Anātman and "entire emptiness". When he had made an end, I asked him, what then Nirvana itself is; and after a long pause came at last the single answer, low and restrained: "Bliss—unspeakable".¹

The writings of Rabindranath Tagore glow with the light and warmth of the numinous. These feelings of indescribable bliss are, of course, characteristic of all mystical experience. The testimony of the mystics must form a large contribution to our natural history of religion. I take that for granted. An important feature of the whole experience, common to the mystics of all great religious traditions is, in the words of Professor Grensted, "the complete and self-authenticating character of the 'sense of presence' which accompanies it." Apart however from the real mystics, those exceptional characters who reach the higher flight of vision, there are all those who lead more normal lives but give us the same essential testimony, as so well expressed by Dean Inge:

It will be found that men of pre-eminent saintliness agree very closely in what they tell us. They tell us that they have arrived at an unshakable conviction, not based on inference but on immediate experience, that God is a spirit with whom the human spirit can hold intercourse; that in him meet all that they can imagine of goodness, truth, and beauty; that they can see his footprints everywhere in nature, and feel his presence within them as the very life of their life . . . ²

What Inge is here describing is the sense of the Divine immanence which forms so large a part of the numinous of Otto; particularly note that it includes the beauty of nature. I am sure that there is this link with the loveliness of the natural world. Otto says little about it, but he clearly recognizes it, for as an appendix to his book he gives the quotation from Ruskin describing his "conception of Sanctity in the whole of Nature" to which I shall presently refer (p. 117).

Otto has given us the name numinous for, and described something of the qualities of, what has really been at the heart of religion since the earliest feelings of *mana* and *wakan* of primitive tribes. It surprises me to learn that a number of theologians and others interested in the development of religious thought appear to hold the view that the sense of the Divine presence, which was so prominent in the gospels,

¹*loc. cit.*, p. 39.

²*Lectures on Christian Mysticism*, 1899 (p. 326), quoted by William James in his *The Varieties of Religious Experience*, p. 271.

only came to reappear in later history and to occupy a considerable place in religious philosophy comparatively recently through the work of Schleiermacher (1768-1834) and Ritschl (1822-89). Professor Grensted for example writes:

In the Middle Ages the rational aspects of Christianity were worked out into the immense system of scholastic theology and faith as right belief was strongly emphasized. This was hardly modified, psychologically speaking, by the substitution at the Reformation of the inerrant Bible for the inerrant Church as the practical guide necessary alike to man's reason and to his salvation. A more fundamental and subtly very far-reaching change of emphasis came much more recently with the influence of Schleiermacher and Ritschl, emphasizing the immediacy of religious experience and reasserting, in different ways, at one and the same time the primacy of direct "God-consciousness" and of ethical values as against cult practice and theological formulation¹.

Or again Professor J. B. Pratt on p. 6 of his psychological study *The Religious Consciousness* writes:

This subjective nature of religion seems to be almost a discovery of our own times. The Eighteenth Century practically identified religion with theology, and it was not till after the psychology of Schleiermacher, on the one hand, and the evolutionary point of view on the other got well ingrained in the minds of writers on religion that the relatively subordinate position of any particular belief within the life of religion was appreciated.

Otto himself in developing his theme seems to imagine that he has had only this one forerunner, Schleiermacher, and in dealing with him I cannot help feeling that he is somewhat hypercritical. "Schleiermacher has the credit of isolating a very important element in such an experience. This is the feeling of dependence. But this important discovery . . . is open to criticism in more than one respect."² Or again "Schleiermacher's exposition of his great discovery suffers from two defects . . ."³ and finally "Schleiermacher calls such an experience 'intuition and feeling of the infinite'; we give it the name of 'divination'. "⁴

Surely the feeling of the infinite, whether you call it intuition or divination, was not the discovery of either Schleiermacher or Otto.

¹*The Psychology of Religion*, 1952, p. 11.

²*The Idea of the Holy*, p. 9.

³*loc. cit.*, p. 149.

⁴*loc. cit.*, p. 215.

attempt to possess the females. Those that remained did so only by repressing their desires towards the father's wives and their desires were diverted into homosexual ties which bound them together into a unity; acting together they eventually attacked and killed the father—and ate him. The brothers now fought until one became the new leader and father of the next generation and so on. In time, however, they learned not to fight amongst themselves, but remained united by accepting the veto of the father so that the women of the tribe became *taboo* and they sought their wives from other groups. The dead father then became symbolized into an animal held sacred as the *totem* of the tribe; and the killing and eating of this animal, the primal father, was periodically renewed in the totem feast. Such is the merest sketch—a caricature many will say—of Freud's early speculations on the origin of the idea of God, which depended much upon the writings of Sir James Frazer; we are, however, doing no more than just noting them here, because they have subsequently been severely criticized by social anthropologists¹. I give, as a footnote²

¹For example by Emile Durkheim and E. E. Evans-Pritchard (see quotation from the latter on p. 63) and by Godfrey Lienhardt who writes in *Social Anthropology*, p. 141: "his [Freud's] use of anthropological material in *Totem and Taboo* leaves much to be desired".

²As an example of the highly speculative nature of Freud's ideas concerning the origin of religion I quote a passage from his *Totem and Taboo* (p. 154 of the new translation by James Strachey) where he is linking Christian doctrine with totemism:

"There can be no doubt that in the Christian myth the original sin was one against God the Father. If, however, Christ redeemed mankind from the burden of original sin by the sacrifice of his own life, we are driven to conclude that the sin was a murder. The law of talion, which is so deeply rooted in human feelings, lays it down that a murder can only be expiated by the sacrifice of another life: self-sacrifice points back to blood-guilt. And if this sacrifice of a life brought about atonement with God the Father, the crime to be expiated can only have been the murder of the father.

"In the Christian doctrine, therefore, men were acknowledging in the most undisguised manner the guilty *primaeval* deed, since they found the fullest atonement for it in the sacrifice of this one son. Atonement with the father was all the more complete since the sacrifice was accompanied by a total renunciation of the women on whose account the rebellion against the father was started. But at that point the inexorable psychological law of ambivalence stepped in. The very deed in which the son offered the greatest possible atonement to the father brought him at the same time to the attainment of his wishes *against* the father. He himself became God, beside, or, more correctly, in place of, the father. A son-religion displaced the father-religion. As a sign of this substitution the ancient totem meal was revived in the form of communion, in which the company of brothers consumed the flesh and blood of the son—no longer the father—obtained sanctity thereby and identified

a quotation from *Totem and Taboo* to show that my sketch is not, I think, too crudely drawn. Another reason for not going more fully into these particular ideas here is that, apart from anthropological falsity, they are based upon a biological fallacy. Freud's comparison between what is supposed to have happened in primitive history and what occurs in the life of each individual reflects the one-time held, but now discredited, theory that the individual in the course of its development actually recapitulates in shortened form the ancestral line of evolution. What he appears to suggest is that there is an actual organic connection between what goes on in an individual's mental development and what happened far back in racial history. He seems in fact to have an idea similar to that of Jung's archetypes and shared subconscious. He actually admits towards the end of the book that it is a far-fetched idea:

No one can have failed to observe, in the first place, that I have taken as the basis of my whole position the existence of a collective mind, in which mental processes occur just as they do in the mind of an individual. In particular, I have supposed that the sense of guilt, for an action, has persisted for many thousands of years, and has remained operative in generations, which can have had no knowledge of that action. I have supposed that an emotional process, such as might have developed in generations of sons who were ill-treated by their father, has extended to new generations which were exempt from such treatment, for the very reason that their father had been eliminated. It must be admitted that these are grave difficulties; and any explanation that could avoid presumptions of such a kind would seem to be preferable¹.

Freud's later and more mature ideas regarding the nature of religion

themselves with him. Thus we can trace through the ages the identity of the totem meal with animal sacrifice, with the anthropic human sacrifice and with the Christian Eucharist, and we can recognize in all these rituals the effect of the crime by which men were so deeply weighed down but of which they must none the less feel so proud. The Christian communion, however, is essentially a fresh elimination of the father, a repetition of the guilty deed. We can see the full justice of Frazer's pronouncement [*The Golden Bough*, part v, vol. 2, p. 51, 1912] that 'the Christian communion has absorbed within itself a sacrament which is doubtless far older than Christianity'." [Translator's note: No one familiar with the literature of the subject will imagine that the derivation of Christian communion from the totem meal is an idea originating from the author of the present essay.]

¹*Totem and Taboo*, new translation by James Strachey, pp. 157-8.

deserve more serious consideration. They are developed in his *The Future of an Illusion* in which he attempts to show that his later doctrine of the origin of the super-ego as a result of the resolution of the Oedipus complex, and the subsequent development of the child mind, is sufficient to explain all of man's religious yearnings and beliefs. For him the whole idea of theism is a gigantic illusion. Without accepting the force of the Oedipus argument—for reasons I shall give—I do think it likely that there is a deal of truth in Freud's conception of the nature of the super-ego and the way it has been built into our minds in early childhood by the process he calls the internalization of external authority. I would myself, however, think it more likely that this process came about in the early evolution of man's cultural system in the manner outlined by Professor Waddington in his *Ethical Animal* which I have already discussed (p. 46). The formation of the id by repression must also be regarded as an important concept for us.

I may say at once, as I said at the end of my first series of lectures, that I am not a bit disturbed by the idea that our conception of God as a person—Our Father which art in Heaven—is based upon our early childhood-parent relationship. I think it likely that Freud has explained a great deal, but, as I have just implied, not through the Oedipus complex; and I do *not* believe, for reasons I shall enlarge upon later, that Freud has destroyed a reasonable belief in the spirit of man and his contact with a power beyond himself which, to my mind, provides the theism for a true natural theology. The illusion that Freud is showing us does not, I believe, destroy, as he imagines, the whole concept of Divinity, but changes our ideas from those formed over three thousand years ago, of a great, invisible potentate, Jehovah (Yahweh). It is indeed a change in our idea of God, but one no more, or no less, radical than that which substituted the Copernican solar system for the optical illusion that the sun went round a central earth.

As an illustration of this change of view I cannot do better than give another quotation from Dr. Lee's book *Freud and Christianity* which will show how a modern Christian theologian can accept the influence of Freud. It is clear that such views are gaining ground in both Anglican and academic circles. Dr. Lee is Chaplain of both Nuffield and St. Catherine's Colleges, Oxford, and he wrote the book, on which he was awarded the Doctor of Philosophy degree, when he was Vicar of St. Mary the Virgin, the University Church. The work is published in a series called "Theology for Modern Men" edited by Canon A. E. Baker who writes in the introduction, "A careful reading

of this book will provoke both Christians and psycho-analysts to think again, if only because it provides criteria by which more healthy forms of Christian religion may be discriminated from less worthy varieties." It was described in a *Church Times* review as a book "far more important than its size might suggest." Dr. Lee writes:

In projecting the father upon the world and arriving at the idea of God, the unconscious does not carry over only the protecting father. We have seen that the father is also a source of danger to the infant. In the same way that the protective character of the father enters into the idea of God, so does the danger from the father. He first appears as frustrating the wishes of the infant and imposing an arbitrary authority upon him to which obedience is compelled by the absolute power. . . . God is, as it were, the enemy . . . counting every transgression against us, even visiting the sins of the fathers upon the children, grandchildren and great-grandchildren. In His eyes we are so bad that there would be no hope of escaping His everlasting wrath if it weren't that His Son is on our side and, by accepting punishment for our sins while himself innocent, satisfies the demands of God and procures pardon for us. This is the religion of Hell fire, of everlasting damnation, of a God jealous of His rights and His honour, exacting every ounce of homage and obedience from worthless man; religion much more occupied with sin than with love.¹

Or again:

There is a large section of Christian teaching which believes that the ideal Christian life is attained by having a dominating Super-ego strong enough to enforce all its demands on the Ego and to suppress the Id. This type of Christianity concentrates in its moral teaching on developing a sense of sin, which means, psychologically, sharpening the subservience of the Ego to the Super-ego at the expense of the Id. The Ego is made to feel its unworthiness, its failure to live up to its ideal, and is discouraged in every way from rebelling against the Super-ego. As an acknowledgement of its guilt all sorts of penances are encouraged—rigid discipline of life, fasting, acts of duty. Duty is the keynote of this moral system. The result of this training frequently is to develop a sort of vicious circle. By cultivating a sense of sin and strengthening the dominance of the Super-

¹*Freud and Christianity*, p. 137.

ego the Ego is made to feel its guilt and unworthiness more intensely. But the more guilty the Ego feels the more strongly the Super-ego attacks it, thereby further increasing the feeling of guilt. So the circle goes on until the Ego is almost paralysed from undertaking novel action. The only brake on the process is obtained through penances and mortification, even to the extent of self-inflicted pain.¹

Whether or not we believe that the Oedipus complex is as important as the Freudians make out—or perhaps find Waddington's view of the formation of the super-ego more reasonable, as I do—it does look as if Dr. Lee is right in seeing this cultivation of the sense of sin and guilt as an increasing domination of the super-ego. How then does he believe that Christianity can escape from this psychological nightmare? He believes that Jesus taught a different kind of religion, one in which the ego—the real self—must not be so dominated, but must judge by insight what is good. It is a religion in which the self, the ego, feels in touch with a God who is both loving and lovable, and one also seen in the beauty of nature. The God of the Pharisees, Dr. Lee says:

was simply a projection of the unconscious father-image, the core of the Super-ego, and because they gave supremacy to it, their God was not the real God with whom Jesus was concerned and Who could be seen in the lilies of the field, in the farmer sowing his crop, or a father welcoming home a long-lost son, that is, a God discoverable by the Ego.

Perhaps I am being unfair to Dr. Lee in picking out only a few questions without going further into his interesting and detailed reconciliation of the principles of Freudian psychology and those of Christian theology. I merely want to show what a change this new psychology may bring about in the consideration of theological problems. As I said before, not being a psychologist, I am not laying down any dogmatic view myself; I am only saying that these are ideas which, together with some of those of Jung, must be carefully examined in building our scientific Natural Theology. We must be careful not to be carried away in our enthusiasm for this or that hypothesis that appears at first sight to offer some solution to our problems; each must be weighed carefully, and as much evidence as possible sought, before we incorporate them into our scheme of thought. Whether we accept them fully or not, the ideas of Freud must make us always

¹*ibid.*, p. 162.

on the look out, lest the arguments we are putting forward in support of this or that belief, may not be false rationalizations invented by our minds to suggest a reasonable explanation for some view which is really based upon some deeper, hidden and quite different motive.

This psychology is certainly warning us against the subtlety of our hidden mental springs. I sometimes wonder if Freud himself and some of his followers have not in part been victims of their own subconscious ids. Most of their conclusions about the importance of sex in early childhood seem to me to be based much more upon the psycho-analysis of *adults*—from which they infer *what they think* must have been their very early sexual emotions—rather than upon careful observations of infant life. Again I do not pretend to be an authority; I will, however, point out that serious doubt has been thrown upon the very idea of the Oedipus complex forming an important part in the infant life of normal children by detailed observations such as those of Professor C. W. Valentine in his *The Psychology of Early Childhood*. I quote from his third edition (1945):

Freud has asserted that after the age of about 2 boys begin to be passionately devoted to their mother and to be jealous of and even to hate the father, thus revealing an "Oedipus complex". Girls, on the other hand, develop a new devotion to the father and regard the mother as a rival. Two types of evidence of the Oedipus complex are offered: (a) one is the direct observation of children which Freud says reveals it; (b) the other is the result of psycho-analysis of adults. With this second one we shall deal later. As to (a), I can find no evidence whatever in the observations on my own children for such an Oedipus complex. Indeed, it will be seen that most of the evidence is directly contrary to it, especially the fact that the girls preferred their mother more than the boys did after the age of about 2 when, according to Freud, the boys should begin to turn against the father and the girls should favour him. The relations of the children to parents are exactly as might be expected on general grounds. First strong attachment, shown by boys and girls for the mother—the nurse and comforter. Later, some attraction after the second year towards the father who can enter into their play, and, if the more severe at times, can provide the most exciting delights. But this increased attraction of the father after 2 or 3 showed much more in the boys than in the girls; the tastes and interests of the girls being even at this early

age more in line with the mother's than with the father's.
(p. 316)

and later:

Summing up these parts of our inquiry, we may say that the preferences shown by boys and girls do not fit in with the supposed development of an Oedipus complex, but rather they support the ordinary explanation of affection based upon the usual greater devotion of the mother to *all* infants in the first four or five years. The facts as to discipline and its relation to preference also support this, as do the few facts about jealousy.
(p. 328)

and regarding the development of sex:

The truth seems to be probably this: that any sexual sensations and impulses are only of a very mild kind in the great majority from early infancy at least until a year or two before puberty, but can be kept alive and stimulated by the influence and suggestion of others . . .

Having given such prominence to the Freudian theories I would like to quote the views of Sir Frederic Bartlett given in his Riddell Memorial Lectures on *Religion as Experience, Belief, Action* in 1950 when he was Professor of Experimental Psychology at Cambridge. In his introductory paragraphs he is discussing the nature of religious beliefs:

These issues, [he says] as many people have claimed, seem to be inevitably bound up with the assertion that in some way the truth and the worth of religion come from a contact of the natural order with some other order or world, not itself directly accessible to the common human senses.

So far as any final decision upon the validity or value of such a claim goes, the psychologist is in exactly the same position as that of any other human being who cares to consider the matter seriously. Being a psychologist gives him neither superior nor inferior authority.

I thought it necessary to say this at the very beginning of these lectures, because one of the most widely known and influential of modern psychological systems has applied itself to religion, and has, in certain of its developments, made two claims. The first is that all the forms and the original impulses of human religion can be given a complete and full causal explanation within what is called the natural order of events.

The second is that there can be therefore no other explanation. Now even if the first claim were completely justified—and speaking for myself, as a psychologist, I am by no means satisfied that it has been—the second would still rest upon two further assumptions: that a “natural” explanation is truer, or better, or both, than any other; and that one explanation is better than two. These *are* assumptions. They demand some support, and it will be found that the support available very soon runs beyond the limits of psychology.

I have already given another quotation from this lecture by Professor Bartlett in lecture IV (p. 104).

I am conscious that in any discussion on the interrelation of psychology and religion the work of Jung should be given prominence. In the words of Professor Grensted: “In general Jung’s psychology has proved far more tractable in the study of religious behaviour than the more rigid and more dogmatic position taken up by Freud and his followers”, and again he says, “It is probably true to say that the most important developments of the psychology of religion in the last twenty years have been due to Jung.” Yet I must confess that I find it exceedingly difficult to understand his views as expounded in his works, especially those devoted to religion: *Psychology and Religion* and *Modern Man in Search of a Soul*. He speaks in riddles. Particularly do I find it almost impossible to find a consistent account of what he really means by his concept of the shared unconscious and the influence of the archetypes. One gathers that for him the individual is (again in the words of Grensted) “regarded as an outcropping of the collective impersonal unconscious.” Turning to his autobiography *Memories, Dreams, Reflections* one finds it full of religious feeling, but again, at any rate for me, how intangible. From his chapter on “Late Thoughts” (p. 310) I take this example:

Therefore the validity of such terms as *mana*, *daimon*, or *God* can be neither disproved nor affirmed. We can, however, establish that the sense of strangeness connected with the experience of something objective, apparently outside the psyche, is indeed authentic.

We know that something unknown, alien, does come our way, just as we know that we do not ourselves *make* a dream or an inspiration, but that it somehow arises of its own accord. What does happen to us in this manner can be said to emanate from *mana*, from a *daimon*, a god, or the unconscious. . . .

I prefer the term "the unconscious", knowing that I might equally well speak of "God" or "daimon" if I wished to express myself in mythic language. When I do use such mythic language, I am aware that "mana," "daimon," and "God" are synonyms for the unconscious—that is to say, we know just as much or just as little about them as about the latter. . . . The great advantage of the concepts "daimon" and "God" lies in making possible a much better objectification of the *vis-à-vis*, namely, a *personification* of it. Their emotional quality confers life and effectuality upon them. Hate and love, fear and reverence, enter the scene of the confrontation and raise it to a drama. What has merely been "displayed" becomes "acted". The whole man is challenged and enters the fray with his total reality. Only then can he become whole and only then can "God be born", that is, enter into human reality and associate with man in the form of "man". By this act of incarnation man—that is, his ego—is inwardly replaced by "God", and God becomes outwardly man, in keeping with the saying of Jesus: "Who sees me, sees the Father."

I find this very obscure, but let me give one more quotation from Grensted which I think may make it clearer:

We have not progressed a step beyond the often criticized conjectures of William James when he stated as his "over-belief" the view that at the outer margin of the subliminal self we may be in direct touch with a "more of the same kind", not ourselves, and that we may regard that meeting-place as the sphere of Divine action upon us. There is an obvious similarity between this view and the more elaborate hypotheses put forward by Jung¹.

And now another from James:

But if you, being orthodox Christians, ask me as a psychologist, whether the reference of a phenomenon to a subliminal self does not exclude the notion of the direct presence of the Deity altogether, I have to say frankly that as a psychologist I do not see why it necessarily should. The lower manifestations of the Subliminal, indeed, fall within the resources of the personal subject: his ordinary sense-material, inattentively taken in and subconsciously remembered and combined, will account for all his usual automatisms. But just as our primary wide-awake

¹*The Psychology of Religion*, p. 83.

consciousness throws open our senses to the touch of things material, so it is logically conceivable that *if there be* higher spiritual agencies that can directly touch us, the psychological condition of their doing so *might be* our possession of a sub-conscious region which alone should yield access to them. The hubbub of the waking life might close a door which, in the dreamy Subliminal, might remain ajar or open¹.

You may remember that in lecture iv (p. 103) I quoted what he called his "over-belief" that "transmundane energies, God, if you will, produced immediate effects within the natural world" through the openness of this subliminal door. It is this—the lively sense of a Divine power beyond the self which we discussed in lectures iii, iv and v and to which I shall return in the last lecture—that gives one the conviction that the super-ego (although an important evolutionary addition to man's mental life) is not the real explanation of Divinity. I agree that this is an over-belief and not a scientific certainty, but with it also goes the belief that it will be strengthened by our growing natural theology; it is further supported by the view that the psychical elements to be considered in lecture viii appear likely to be distinct from material ones and also by the growing conviction, to be discussed in the last lecture, that neither the mind nor the sense of awareness (consciousness) can be regarded as mere epiphenomena of the physico-chemical nervous system.

There is so much more that should be said on the relations of psychology and religion, but I have thought it important to devote the greater part of this one lecture to discussing the impact of psycho-analytical theory. In the next lecture I shall be saying more about one special aspect of the relationship: that of sex and religion. There are, of course, other matters that should be taken into account in our natural history of religion—influences that are partly psychological and partly sociological; it is sometimes maintained, for example, that religion is a response to frustration in that it supplies in fantasy a gratification of the needs of people who feel deprived either of worldly goods or of social status (or both). This and other problems are discussed, together with the psycho-analytical theories, by Dr. Michael Argyle in the book *Religious Behaviour* to which I have already referred (p. 93), and also in a more recent article.²

I will conclude the lecture by saying, with the late Professor

¹*The Varieties of Religious Experience*, p. 242.

²"Seven Psychological Roots of Religion", *Theology*, vol. 67, pp. 333-9, 1964.

Grensted, that I believe that our understanding of the nature of religion and Divinity will contain elements which derive in part from Freud, from Jung and also from William James; in addition however I think it likely that psychology's greatest contribution will be a truer conception of the nature of consciousness and the body-mind relationship, and that in this it will be assisted by future developments in psychical research.

LECTURE VII

ROOTS IN ANIMAL BEHAVIOUR

In my last lecture, I was reviewing some of the current ideas on the relationships between psychology and religion; I was speaking as an observer from the outside and not with any expert knowledge of psychology. I now want to take another aspect of religion which also has a close relation with some of the results of psychological research but which fundamentally is nearer to my own zoological field. It is more as a biologist that I wish to speak in this lecture.

In my former course, and in an earlier lecture in the present series, I have emphasized how close man is to the rest of the animal kingdom—separated mainly by the emergence of explicit knowledge and culture which the coming of speech made possible. Our civilization looked at against the background of the earth's history is so very recent in geological time; it occupies so minute a fraction of the whole of life's two thousand million years of existence that we must recognize that the culture of man is somewhat like a veneer superimposed upon our more basic animal nature. Because of this, the findings of the modern experimental study of animal behaviour are not only of interest to the psychologist; they are, I believe, important also for the natural theologian. They appear to throw light on certain aspects of religious behaviour and particularly upon a supposed connection between sex and religion which has caused some psychologists and others to question the validity of religion as a whole; we must therefore examine the matter carefully.

The very idea that religion and sex should be thought of as in any way connected may appear to some, especially those who have not read very widely in biology, to be an almost outrageous suggestion. As an introduction to what I want to say on this subject, I will ask you to allow me to repeat some of the things I said in the first and the last lectures of my earlier course. I began that series by sketching in outline the nature of the long evolution of life, the living stream as I

called it. We see that it is actually made up of a great number of separate channels representing the past histories of the different species of animals and plants; going back in time we see how these subsidiary streams have diverged one by one from common ancestral sources which further back have sprung from still older common stocks. New lines are continually opening up as new opportunities are presented by the ever changing environment; likewise many lines come to an end in extinction as they cannot adapt themselves to the new conditions. Each of these streams of life, except those just on the verge of extinction, are made up of a vast number of individuals. It is populations, of course, which evolve, not individuals. It is, however, the individuals, each genetically slightly different (except identical twins), which by their very differences provide the physical mechanism for the population changes that constitute the process of evolution. It is because some kinds of individuals tend to be biologically more successful than others, *i.e.* to give rise on the average to a greater number of surviving offspring than other kinds, that the general nature of a stock of animals gradually changes or, as we say, evolves.

We thus see that the continual production of new individuals is essential, not simply to keep life existing, but to provide the necessary changes to make evolution work. We likewise see the necessity for bodily death; without death and the constant replacement of individuals the whole process would be impossible, and life, if it was not changing, would be unable to maintain itself in the face of a continually altering environment. Individual death is the price of progress, and indeed, in animals, of race survival. But let us look not at death, which is the negative side of the picture, but at birth, the creation of the essential new material. Only the production of new kinds of bodies can enable the living stream to cope with new kinds of conditions. Among very primitive forms of life new individuals may be formed by the simple process of one creature dividing into two and these again undergoing binary fission and so on; or again others may give rise to new ones by just budding off small parts of themselves which grow into new fully formed individuals. Such forms of generation, however, are only giving rise to new members which have a similar genetic constitution to that of their parents; any change must await the odd chance mutation which is a relatively rare event. How the process of sex arose we have no idea; it must have occurred very early in the history of life for it is the predominant form of reproduction throughout the whole of the plant and animal kingdoms. Once sex

had been evolved it provided the mechanism for the continual reshuffling of the genetical material at each generation by the fusion of the female egg and male sperm cells. The hereditary counters—the genes, the DNA code material—from two individuals are thus combined together; but this is not all, in the method of forming the sex cells which are to produce the *next* generation, evolution has produced a remarkable mechanism which provides the maximum possible reassortment of the different parental genes. Sexual attraction in bringing male and female together is one of the most important elements of behaviour in the whole process of evolution.

We ourselves are part of this stream of life. In the first lecture of my former series, when I described the nature of this stream, I said we were like little eddies in its flow, eddies caused by the fusion of little genetic currents which meet and then split apart again in our children. We individuals, I said, are little eddies caused by love. Whilst, of course, not all love is sexual, such love, or sexual attraction if you prefer so to call it, in the animal world, is, as we have just reminded ourselves, one of the greatest forces in the mechanism of creation.

Other forms of love are important in the process too; among the higher vertebrates such as birds and mammals, parental and filial love may be vital for the successful rearing of the broods. I know that as a biologist I should be expected at least to put the word love in inverted commas or better speak of filial or parental attachment; as you will have gathered, however, I do not believe that the coming of speech and the initiation of explicit thinking has either created consciousness or so completely altered man's fundamental animal nature that we can suppose his emotions are very different from those of his mammalian relations. Our own love of life and adventure may also be a development of that exploratory sense of curiosity found in the animal kingdom.

Then there is what some of us call the love of God. I expressed the view in the last lecture that this devotional feeling—felt as if directed towards a person—may well have had its form moulded, as most psycho-analysts believe, from that of our child-parent love relationship. But this, I insisted, need not rule out the reality of the something we feel in contact with in the universe; far from it, while we feel it to be of a personal nature, we at the same time recognize that this is almost certainly a naïve childish way of expressing what is really a vastly more profound relationship than any we can as yet understand. It is a relationship with that which, in those words of

L. P. Jacks (quoted on p. 105) "responds to the confidence of those who trust it, declaring itself to them as a fellow-worker in the pursuit of the Eternal Values, meeting their loyalty to it with reciprocal loyalty to them . . ." It is the something which, as we saw in lecture III, primitive man, in all parts of the world, has felt in touch with; and it is the something at the heart of all the religions of the world. "Religion" said Malinowski, "makes man do the biggest things he is capable of." To my mind this feeling of being in touch with something beyond the self is as much a reality—a biological reality in being a part of the living process—as any other form of love; and like other kinds it is not recorded by the physical senses, but is a psychical element awaiting to be further revealed by a more natural, a more penetrating, psychological theology. It is obviously fruitless to speculate upon what we can never find out; I may, however, just say a word in that direction if only to express my sense of our oneness with the animal world. It would not surprise me, could we know it, if this experience of an emotional contact with something greater than the self, which we are only just beginning to express with difficulty in words, was seen to be a development of some animal feeling of joy; it might perhaps (to be more wildly speculative still) be associated with some subconscious psychical source of behavioural "know-how" shared in some extra-sensory way between members of a species.

May not all forms of love be related? Some may be shocked at this, yet, as I said in my very first lecture¹, I think it is not out of harmony with the findings of biblical scholars. In that greatest of all mines of evidence of man's evolving religious experience, the Bible, we see striking and significant changes in the meanings and use of the words for love. We see, for example, in the Old Testament, the change in emphasis of the Hebrew word *ahabh* from that of sexual love to that of the love of righteousness; or again in pre-Biblical Greek we see the transition from the sensuous *eros*, through the friendly love of *philia* to the *agape*, the predominant love in the New Testament².

As I said at the end of my last course of lectures, it should not alarm us if it is found that in some way the spiritual power of the Universe is linked with what we have seen to be one of the greatest forces in the mechanism of organic evolution: sex. If that should be so, it would not be so much the worse for the spirit, but so much better for sex—

¹i.e. of my first series *The Living Stream* (p. 39).

²See the volume on *Love* by Quell and Stauffer, 1933 (translated by J. R. Coates, 1949) from Kittel's *Theologisches Wörterbuch zum Neuen Testament*.

that thing of love and beauty which has inspired the poets and artists. Just as the passions of sex may be turned to evil and made base, so may those of religion become twisted, sometimes into unspeakable cruelty. There can be no doubt that there are some elements in religion which appear to have a close parallel with those of sex. The desire for self-sacrifice and self-abasement, so frequently found associated with a devotion to God, has merged from time to time into the practice of self-torture—as in the flagellants of the Middle Ages—a practice which is well known, in the psychology of the abnormal, to be a sexual deviation. There are these two forms of sexual distortion—sadism and masochism—which in some curious way have from time to time become entwined into religious behaviour. Aldous Huxley vividly portrayed the terrible masochistic passions in the strange half-Christian half-heathen religion that lingered on in the “native reserve” of the future in his *Brave New World*. To many this seems such an unsavoury subject that it should be left alone except for discussion in books on abnormal psychology; others are so appalled when they realize the ghastly horrors that have been carried out in the name of religion in the past, as in the tortures under the Inquisition, that they suspect that all religion is really in the nature of such a mental perversion. These are charges that any natural theology must consider to the full; certainly no true natural history of religion can ignore them.

It is from the study of animal behaviour that we get an insight into the way in which two opposite types of action—aggression and submission—have become incorporated into the sexual life of many species. When we see how this has come about we shall have a better understanding of the nature of these two, active and passive, forms of human behaviour; and this should help us in turn to appreciate a little better their relationship to some religious actions. For this reason I will devote part of this lecture to animal natural history.

It is unfortunate that the term “behaviourist” should have been applied to a particular school of biology (or psychology) that sought to interpret the behaviour of man and animals entirely in mechanistic terms and relied almost exclusively upon observations made on the reactions of animals to various stimuli applied under the artificial conditions of the laboratory. These so called “behaviourist” researches received their name before the development of quite a different kind of behaviour study—one which should *not* be confused with them; this is the investigation of the behaviour of animals living under natural

conditions which has developed to become a new branch of biology now called ethology.

This new approach is very recent and has largely come into being through the pioneer work of Dr. Konrad Lorenz and Dr. Niko Tinbergen who have converted such studies from being anecdotal natural history into a true science. They have brilliantly shown that, by altering one condition at a time, or by introducing models to represent, say, a predatory or a courtship situation, it is possible to analyse their animals' reactions in a strictly experimental fashion whilst maintaining them in their normal natural surroundings.

These studies have shown us that the two complementary kinds of reaction between members of the same species—aggressive and submissive—have been developed again and again in the course of evolution as among fish, birds and mammals. Such behaviour may occur for example between rival males in relation to competition for breeding or feeding territory, or between different members in a social hierarchy, as among gregarious primates, or in a female society as in the peck order among hens; we then see in many species the same kind of reactions being incorporated into courtship behaviour, with the females usually taking the more submissive rôle.

Frequent conflict between rival members of the same species, *if fought out to the death*, would be harmful for the race; natural selection has consequently favoured patterns of behaviour which normally prevent this fatal outcome. In its simplest form it would amount to no more than attack and retreat. The owner A of a piece of territory, which he has taken possession of, at once adopts a threat posture towards the interloper B who now retreats back into his own territory; now if A invades the territory of B, then B will threaten A who now in turn retreats. Dr. Tinbergen illustrated this with a very simple experiment with sticklebacks. Males A and B had built nests at opposite ends of an aquarium and defended their respective territories. He now enclosed each male in a glass tube and placed them side by side in the territory of A. At once A tries to attack B, and B in its tube turns away from A and tries to flee; he now moves the two tubes over to the other end of the aquarium into the territory of B and at once the behaviour patterns are reversed, B tries to attack and A turns away and tries to flee.

We see just the same kind of behaviour in many species of birds in regard to the area they have claimed exclusively as theirs for the gathering of food to feed their young; the males defend their territory

by driving off other males who may try to trespass on it. Actual fighting, however, rarely occurs; the attacking male usually adopts certain postures which at once have the effect of intimidating his adversary. The robin for example displays his red breast, which, writes Dr. Lack, "is stretched and so held that the intruding robin sees as much of it as possible." The threat is certainly effective. "The intruding robin usually departs almost at once, and rarely does the attacking bird have to change from posturing to direct attack to achieve this." The exhibition of the red breast suffices. "Just as its song is a war cry", says Lack, "so its red breast is war paint, both helping to prevent a fight coming to blows." Another example is the curious forward threat posture of the black-headed gull, described by Dr. Tinbergen, in which the bird adopts a crouching position with its neck and open beak stretched forward in a menacing attitude. The male stickleback, I should also have said, has a special threat posture, "standing" vertically on its head in the water with its sharp spines erected.

When actual fighting between rival males does occur under natural wild conditions it rarely ends in one killing the other; generally one, before it has been too severely damaged, will decide it has had enough and will flee. Only with animals kept in captivity where flight is impossible do we get the unusual occurrence of an animal killing another of its own kind. Now in a number of species, particularly among birds and mammals, instead of escape a curious act of appeasement has developed, the opposite of threat; it is a surrender which at once has the effect of stopping the fight. Dr. Konrad Lorenz in his charming book *King Solomon's Ring* gives a number of examples. Let me quote his dramatic account of an encounter he saw between two wolves in the Whipsnade Park.

An enormous old timber wolf and a rather weaker, obviously younger one are the opposing champions and they are moving in circles round each other, exhibiting admirable "footwork". At the same time, the bared fangs flash in such a rapid exchange of snaps that the eye can scarcely follow them. So far, nothing has really happened. The jaws of one wolf close on the gleaming white teeth of the other who is on the alert and wards off the attack. Only the lips have received one or two minor injuries. The younger wolf is gradually being forced backwards. It dawns upon us that the older one is purposely manoeuvring him towards the fence. We wait with breathless anticipation what

will happen when he "goes to the wall". Now he strikes the wire netting, stumbles . . . and the old one is upon him. And now the incredible happens, just the opposite of what you would expect. The furious whirling of the grey bodies has come to a sudden standstill. Shoulder to shoulder they stand, pressed against each other in a stiff and strained attitude, both heads now facing in the same direction. Both wolves are growling angrily, the elder in a deep bass, the younger in higher tones, suggestive of the fear that underlies his threat. But notice carefully the position of the two opponents; the older wolf has his muzzle close, very close against the neck of the younger, and the latter holds away his head, offering unprotected to his enemy the bend of his neck, the most vulnerable part of his whole body! Less than an inch from the tensed neck-muscles, where the jugular vein lies immediately beneath the skin, gleam the fangs of his antagonist from beneath the wickedly retracted lips. Whereas, during the thick of the fight, both wolves were intent on keeping only their teeth, the one invulnerable part of the body, in opposition to each other, it now appears that the discomfited fighter proffers intentionally that part of his anatomy to which a bite must assuredly prove fatal. Appearances are notoriously deceptive, but in his case, surprisingly, they are not!

Another example he gives is the fighting of turkeys. I will quote again:

If a turkey-cock has had more than his share of the wild and grotesque wrestling-match in which these birds indulge, he lays himself with outstretched neck upon the ground. Whereupon the victor behaves exactly as a wolf or dog in the same situation, that is to say, he evidently *wants* to peck and kick at the prostrated enemy, but simply cannot; he would if he could but he can't! So, still in threatening attitude, he walks round and round his prostrated rival, making tentative passes at him, but leaving him untouched. . . .

. . . Whatever may be the reasons that prevent the dominant individual from injuring the submissive one, whether he is prevented from doing so by a simple and purely mechanical reflex process or by a highly philosophical moral standard, is immaterial to the practical issue. The essential behaviour of the submissive as well as of the dominant partner remains the same:

the humbled creature suddenly seems to lose his objections to being injured and removes all obstacles from the path of the killer, and it would seem that the very removal of these outer obstacles raises an insurmountable inner obstruction in the central nervous system of the aggressor.

Now, as I have already said, in the courtship of many birds and mammals we get elements of both aggression and submission forming parts of the mating ritual with the female usually taking the more passive rôle. Both Lorenz and Tinbergen have rightly stressed that we must at present be extremely cautious in attempting to link human behaviour with that of animals. We must not jump to conclusions; we must first make far more detailed observations of human reactions on the lines of the modern ethologists' animal studies before we try to make any exact comparisons or interpretations. Nevertheless the widespread development of both aggression and submission in the animal kingdom and its frequent incorporation into mating behaviour shows us that we need not be surprised at both these aspects appearing in the sexual life of man. Having noted this we should not forget that to begin with the act of appeasement was, more fundamentally, developed as one of submission to an acknowledged superior¹. This I think is significant for our special interest as we shall presently see.

Psychologists tell us that there is nearly always a mixture of these two tendencies, aggression and submission, in any individual, and moreover that there are traces of each in nearly everyone. It is only in extreme cases that they may take a prominent place in the sexual life of a married pair as when we get the horrifying cases of a wife-beating husband or, on a lighter note, the wife who yearns romantically for the rough treatment of a "caveman" and is disappointed at the mildness of her husband. It is, however, in individuals who, for one psychological reason or another, have developed abnormally in regard to their sexual relations, that we may find sexual pleasure itself being sought either from aggressive action, cruelly inflicting pain on another, or its reverse, experiencing pleasure by submission to inflicted pain. These are the two forms of sexual deviation known respectively as sadism and masochism. Any form of sexual deviation is repugnant to the normal mind so that the discussion of this subject is almost

¹It is true that the origin of sex in evolutionary history is far older than fighting between members of the same species; nevertheless appeasement behaviour in courtship display is only found among the vertebrates and the more highly developed invertebrate animals.

taboo. It happens, however, that very serious attacks have been made upon some phases of religious practice, and particularly upon certain aspects of Christianity, by those who maintain that much of it is really a form of masochism in psychological disguise. We must certainly consider these charges.

Before going any further let me give some definitions and brief explanations of these two opposite forms of behaviour. Because they usually occur together, they have, by some psychologists, been classed under the one heading of Algolagnia. Havelock Ellis in his *Psychology of Sex* (1933) says "Algolagnia is a convenient term (devised by Schrenck-Notzing) to indicate the connection between sexual excitement and pain without reference to its precise differentiation into active and passive forms." "Sadism" he says "is generally defined as sexual emotion associated with the wish to inflict pain, physical or moral, on the object of the emotion. Masochism is sexual emotion associated with the desire to be physically subjugated or morally humiliated by the person arousing the emotion." It is particularly, but not entirely, in respect to the moral humiliation phase of it that the link with religion may come in. Dr. Clifford Allen in the most recent authoritative work *A Textbook of Psychosexual Disorders* (1962), after saying that Sado-masochism is a complex condition which may conveniently be divided into its two parts, goes on to say: "It must be realized, however, that such a division is never found in nature and that there is always a certain admixture of both conditions in clinical cases. It is believed", he says, "that sadism is the primary state and that masochism is produced secondary to it." He defines sadism as "the obtaining of sexual pleasure from acts of cruelty", and says, "this appears to shade off from apparently non-sexual cruelty to obvious sadism."

Freud believed that both elements occurred in what he called the erotic life of the early infant period. Professor Valentine, however, in his book *The Psychology of Early Childhood*, which I quoted in my last lecture to show that his direct observations on infants did not support Freud's contention of a prominent early sexual phase, writes as follows:

The *sadistic* element is said by Freud to be the other most prominent feature in this early infantile period—"The impulse to mastery, which easily passes over into cruelty". But if, as we have seen reason to believe, there is a relatively independent impulse of aggression or pugnacity, an extreme form of this may well appear to take the form of cruelty for its own sake with no

sexual significance whatever. We may recall that this impulse is so lively sometimes in apparently normal children that there is mere play at pugnacity and aggression. An outlet is found without any external stimulus.

Now let us consider the way in which these impulses have been thought to have a bearing upon religion. I will quote again from the Rev. Dr. Lee's book *Freud and Christianity* which I discussed in my last lecture; it is well first to cite the views of one who is definitely a Christian. You may remember that he fully accepts the Freudian position of dividing the mind into the three elements: the subconscious *id* full of repressed impulses, the authoritative and partly subconscious *super-ego* which keeps control of the *id* and acts as the conscience, and thirdly the fully conscious, reasoning self, the *ego*, which in a sense is between the two. Here is how Dr. Lee sees these influences at work; I quote a continuation of the extract which I gave on p. 148 repeating at the beginning a few sentences already given. He was describing you may remember, the type of Christianity which concentrates on developing a sense of sin and unworthiness:

By cultivating a sense of sin and strengthening the dominance of the Super-ego, the Ego is made to feel its guilt and unworthiness more intensely. But the more guilty the Ego feels the more strongly the Super-ego attacks it, thereby further increasing the feeling of guilt. So the circle goes on until the Ego is almost paralysed from undertaking novel action. The only brake on the process is obtained through penances and mortification, even to the extent of self-inflicted pain. By accepting these the Ego is able to regain some of its self-esteem, for they are the token of its obedience to the Super-ego. Further, since in this type of character there is usually a strong masochistic (enjoyment of suffering) tendency in the unconscious, the *Id* gets satisfaction from the suffering and its pressure on the Ego is reduced in other directions. The masochistic tendency in the *Id* is matched by the aggressive sadistic component of the Super-ego, so that this severe self-discipline produces a considerable libidinal pleasure and is not simply a moral achievement. The more the dominance of the Super-ego grows the more it reverts to its non-moral pre-Oedipus character. Fasting and mortification and self-denial are often regarded as the sign of holiness. Psychoanalysis shows that they readily become perversions of the *Id* and a crippling of the Ego that renders the personality unable to cope

with the problems of life. It forces a retreat from life to a hermitage or convent. It is not a religion for this world. It is an escape from this world, its interests and its works, into the other world.

There can be no doubt, I think, that both sadism and masochism, whether interpreted in terms of the Freudian system or not, have played an occasional part in the history of the religious life, but this does not to my mind destroy the validity of all religion.

There are certainly some who think that this masochistic-sadistic streak suggests that the whole practice of religion is *nothing more* than a form of deviation. This view was vigorously put forward by Dr. David Forsyth, F.R.C.P., who was Senior Physician to the Psychological Clinic of the Ministry of Pensions, in his Presidential Address to the Psychiatry Section of the Royal Society of Medicine in London in 1934. He tells us that the Society refused to print his address in its *Proceedings*; he says this in the preface to his book *Psychology and Religion*, which he subsequently published to present his case in full. We may also note that in his preface, among the acknowledgements, he says "I am specially beholden to the writings of Sir James Frazer and Professor Freud, which are the stimulus to the whole book." We discussed, you may remember, the influence of Frazer's theories upon Freud's ideas in the last lecture (p. 145). I will quote a passage from Forsyth's book (his p. 149). Some will certainly find it very shocking and may feel that I should not give public utterance to what they can only regard as blasphemy. Let me say, before I quote it, that, for the reasons I shall give, I believe that his emphasis is false. Why need I quote it at all then, when it may hurt the feelings of many? I think we must consider it just because it is a view that is, I believe, being held by an increasing number of people who imagine it to be sound psychology. A natural theology must face the issue. If our faith in a spiritual reality is strong we should not be afraid. We must grasp the nettle and examine it, if we are to get at the truth; in doing so I think we shall destroy some of its sting. Dr. Forsyth writes as follows:

The masochistic enjoyment of suffering is exhibited in the widespread habit of self-denial, including poverty, fasting, and sexual abstinence. The whole custom of religious penance comes in this category. To a more unmeasured degree masochism is indulged in the innumerable kinds of self-mortification practised by many Christians, Indian fakirs, and others, from wearing hair-shirts next to the skin to submitting to tortures and revolting

degradations. To cite only a few of the many in Christian history, we have the extraordinary austerities practised by St. John of the Cross, the loathsome penance of St. Catherine of Genoa, the deliberate quest of the repulsive by St. Francis . . .

Masochism comes to full flower in the spirit of the martyr, and the acme of masochism is reached in martyrdom itself, when the greatest of self-sacrifices, that of life, may be sought and enjoyed—all the more, often enough, for its added concomitants of torture and suffering . . .

Just as the teaching of Mahomet is . . . essentially sadistic, so is the teaching of Christ essentially masochistic. The spirit of self-sacrifice which permeates Christianity, and is so highly prized in the Christian religious life, is masochism moderately indulged. A much stronger expression of it is to be found in Christ's teaching in the Sermon on the Mount. This blesses the poor, the meek, the persecuted; exhorts us not to resist evil but to offer the second cheek to the smiter; and to do good to them that hate you and forgive men their trespasses. All this breathes masochism, and nothing about it is sadistic. While Mahomet was virile and sadistic, Christ was gentle and masochistic . . .

Many people will indeed feel that this statement, as it stands, is outrageous; yet I am sure that no doctor with a psychiatric training would deny that *some* acts of humiliation and the self-infliction of pain could be anything other than a masochistic impulse. This perhaps comes as a shock most strongly to those who have never even recognized the existence of these latent tendencies. The enforcement of celibacy in the early church, with its suppression of any normal sexual outlet, no doubt helped to make acts of penance, self-mortification and severe physical discipline a general practice. A tradition had become established that this was the way to create a zealous and dedicated personality. There was then no psycho-analysis to show the hidden springs of repressed sexual impulses. These unconscious elements, I think, almost certainly accounted for *some* of this behaviour but by no means all. Now a deeper acquaintance with psychopathology shows us that there are two *quite distinct* forms of so-called masochism. One of them, although showing effects very like those produced by the other, is now realized to be in fact far removed from sex. The distinction between them has been well made by Dr. Clifford Allen in his *Textbook of Psychosexual Disorders* to which I have already referred. He sharply divides the religious form, which he calls *Moral Masochism*,

from the more usual kind which he calls *Erotogenic Masochism* and there can also be distinguished a third, *Feminine* kind; indeed he reminds us that Freud himself had pointed out that of these various kinds the former is the most distant from sex. He quotes Freud as follows:

The third form of masochism, the moral one, is chiefly remarkable for having loosened its connection with what we recognize to be sexuality. To all other masochistic sufferings there still clings the condition that it should be administered by the loved person; it is endured at his command; in the moral type of masochism this limitation is dropped. It is the suffering itself which matters; whether the sentence is cast by a loved or by an indifferent person is of no importance; it may even be caused by impersonal forces or circumstances, but the true masochist always holds out his cheek wherever he sees a chance of receiving a blow.

Then he himself (Dr. Allen) goes on to say:

It is possible that numerous psychiatrists would refuse to recognize this latter as a real perversion (i.e. sexually connected) . . .

For some unknown reason moral masochism appears to be commoner in the East than in Europe or America. The fakirs who lie on beds of nails, who thrust skewers through their cheeks, who hold an arm in one position until it withers, and so on are all examples of moral masochism. The history of every religion is redolent of it and perhaps it is because the Orient is more favourable for moral and mystical speculation than the Occident that it appears there. Significantly, where excessive mysticism is favoured it reappears—e.g. the Jesuits still practise flagellation.¹

Now that we have seen that it has been suggested that there are these two distinct types of masochism, one sexual and the other not, let me return to our animal behaviour studies for a moment. We saw that among animals in general the submissive act, whether or not it might later become incorporated into mating behaviour, was first of all developed in relation to defeat in fighting with members of the same species: as when a wolf turns its head to offer its most vulnerable

¹A little further in the text he adds the following: "Perhaps it is not surprising that the Jesuits, which are the only sect to practise flagellation, were founded by St. Ignatius, who developed various 'exercises' which obviously have an obsessional compulsive basis."

target to its victor or when a turkey prostrates itself on the ground. It may well be that acts of submission in man were developed primarily in relation to defeat in conflict. Konrad Lorenz would certainly seem to hold this view.

And what is the human appeal for mercy after all? [he asks] Is it so very different from what we have just described? The Homeric warrior who wishes to yield and plead mercy, discards helmet and shield, falls on his knees and inclines his head, a set of actions which should make it easier for the enemy to kill, but, in reality, hinders him from doing so. As Shakespeare makes Nestor say of Hector:

Thou has hung thy advanced sword i' the air,
Not letting it decline on the declined.

Even to-day, we have retained many symbols of such submissive attitudes in a number of our gestures of courtesy; bowing, removal of the hat, and presenting arms in military ceremonial.¹

He goes on, however, to say that in human history, even among Homer's heroes, the appeal for mercy did not always work! And a little later, no doubt being a little fanciful, he says:

The worker in comparative ethology does well to be very careful in applying moral criteria to animal behaviour. But here, I must myself own to harbouring sentimental feelings; I think it a truly magnificent thing that one wolf finds himself unable to bite the proffered neck of the other, but still more so that the other relies upon him for this amazing restraint. Mankind can learn a lesson from this, from the animal that Dante calls "la bestia senza pace". I at least have extracted from it a new and deeper understanding of a wonderful and often misunderstood saying from the Gospel which hitherto had only awakened in me feelings of strong opposition: "And unto him that smiteth thee on the one cheek offer also the other." (St. Luke VI, 26.) A wolf has enlightened me: not so that your enemy may strike you again do you turn the other cheek toward him, but to make him unable to do it.

As a religious feeling in man, that of being in contact with some power greater than the self, developed and gave rise to various rites of worship, it would be natural for the submissive act, originally one of appeasement to a superior person, to be incorporated; it would

¹*King Solomon's Ring*, p. 196.

become one of paying homage to the mysterious power which had now become personified through the transfer to it of the emotional feelings of the child-parent, love-fear, relationship. In saying this, need I remind you from what I said in the last lecture that I do not intend to belittle in any way the reality of this Power which not only for psychological reasons has this character of personality, but which in some extraordinary way, as I shall discuss in lecture x, appears to reciprocate the personal approach.

We see in the history of Christianity the change from belief in a jealous, fearful, angry God of the early Old Testament days to the Heavenly Father, the loving and helpful God, as taught by Jesus. The submissive acts which were appeasement, now became acts of adoration and devotion. Such acts of worship, I would submit, can in no way be likened to a sexual deviation. The argument of Forsyth, and those who think like him, is, I believe, based upon a confusion over the different kinds of masochism; that of the moral kind should be given quite a different name from the ugly one it bears. I am not denying, as I have indicated, that there has been some sadism and erotic masochism in religious history; that, however, is quite a different matter from believing that all forms of Divine worship and adoration are derived from a sexual deviation.

The part played by this moral "masochism" in the development of Christianity in Europe is well illustrated in one of the essays by Lord Gifford which were privately printed by some of his friends after his death and to which I have previously referred. I doubt if he had any idea of the real psychological basis of such discipline. I quote from his moving study of Saint Bernard of Clairvaux. He begins by painting for us the mediaeval scene:

The middle ages! What strange scenes and pictures do not the words recall? The fortalice of the half-savage Baron and the mean huts of his degraded serfs. The proud pomp and spiritual power of the haughty churchman, before which the strength of kings, and the might of feudalism was fain to kneel. The chivalry of Europe drained time after time to furnish forth the armies of the Crusaders. Religious excitements and revivals passing like prairie fires over Europe, and compared with which modern revivals, even the wildest, seem but the coldest marsh gleams. . . .

. . . at twenty-two years of age, in youthful manhood, after full and long consideration, Bernard renounced his inheritance and fortune, renounced his nobility of birth and every title of

distinction, and stood penniless and barefoot, a candidate for admission at the gate of the monastery of Cîteaux. The form of entering Cîteaux was this. The applicant had to wait four days in an outer cell or guest-chamber before he was received by the Chapter. On entering he prostrated himself before the lectern, and was asked by the Abbot what he wanted. He replied,—“God’s mercy and yours.” The Abbot then explained to him the hardships of their life and the severity of their discipline, and again inquired if he still persevered in his intention. If the candidate answered in the affirmative, the Abbot said,—“May God, who has himself begun a good work, himself accomplish it.” This ceremony was repeated on three successive days, and on the third the intrant was passed to the cells of the novices and began the year of his probation.

. . . I ask you to reflect on that wonderful state of society where the educated and upper classes had only two careers open to them, that of the soldier and that of the priest. To be a gentleman in those days meant to be a warrior, and they were almost constantly fighting, besieging each other’s castles or being besieged in their own, following my Lord of Burgundy or my Lord of Avignon or some other feudal suzerain in their endless wars. It was a fierce world. No wonder gentle natures were glad to quit it: . . . to seek a haven of shelter, where during this short life they may say their prayers, and then lie down in peace to sleep, in death.

Bernard had selected the monastery of Cîteaux as his retreat in preference to many others which would gladly have received him, because of the extreme severity of its rules and discipline. There was at hand the opulent and lordly Clugny, where, cushioned in purple state, luxurious monks regaled themselves with the richest dainties and the rarest wines. But penance and mortification were Bernard’s aim, and he added to the austerities of the Cistercian rule voluntary mortifications and additional vigils which almost cost him his life.

After this digression let us return for a moment to the study of animal behaviour and have a look at what may, I believe, be an illuminating analogy: one which may possibly help us to appreciate the nature of man’s religious behaviour in more biological terms. Again let me say I do *not* feel that this should make us think any the less of religion; if it is a good analogy it would just be telling us something

more about its evolution. I believe it is conceivable that the religious emotions and actions of man in relation to this power beyond the self, *i.e.* his devotional feelings towards the personification of this power, may not be unlike the devotion of a dog to his human master; and further that they may have arisen in a somewhat similar fashion. I came to this idea from further passages in Konrad Lorenz's *King Solomon's Ring*. I quote as follows:

The really single-hearted devotion of a dog to its master has two quite different sources. On the one side, it is nothing else than the submissive attachment which every wild dog shows towards his pack leader, and which is transferred, without any considerable alteration in character, by the domestic dog to a human being. To this is added, in the more highly domesticated dogs, quite another form of affection. Many of the characteristics in which domestic animals differ from their wild ancestral form arise by virtue of the fact that properties of body structure and behaviour, which in the wild prototype are only marked by some transient stages of youth, are kept permanently by the domestic form. In dogs, short hair, curly tail, hanging ears, domed skulls and the short muzzle of many domestic breeds are features of this type. In behaviour, one of these juvenile characters which has become permanent in the domestic dog, expresses itself in the peculiar form of its attachment. The ardent affection which wild canine youngsters show for their mother, and which in these disappears completely after they have reached maturity, is preserved as a permanent mental trait of all highly domesticated dogs. What originally was love for the mother is transformed into love for the human master.

I must not become too biological, but it is worth pointing out that, as Bolk¹ has shown us, man himself displays many youthful characters compared with the earlier primate stock. I need not go into details in support of this, as it is well documented in the biological literature²; one such character is our prolonged period of childhood giving greater opportunities of learning and allowing a larger growth of brain by the delayed fusion of the sutures of the skull. What I am about to suggest is, of course, entirely speculative; it is this. It seems to me possible that man, who, like the dog, has juvenile characters, *e.g.*, this prolonged period of childhood and a strong child-parent affection, may,

¹L. Bolk, *Das Problem der Menschwerdung*, Jena, 1926.

²Well summarized in Sir Gavin de Beer's *Embryos and Ancestors*, Oxford, 1940.

also like the dog, have transferred part of the submissiveness which he had shown to his tribal leader, together with his filial affection, to a new master—one of a very unusual kind. This “new master”, a supposed invisible being, is imagined by primitive man to account for the “something” real beyond the self which he felt himself to be in touch with; the something which he called by various names such as mana, wakan, or God when he was able, with the coming of speech, to discuss with his fellow beings this strange feeling of the numinous. It would be an idea which would develop over a period of time in man’s early culture, perhaps alongside the internalization of authority which Waddington has pictured in his *The Ethical Animal* and which we discussed in lecture II. Whilst it is only a suggestion of a possible origin of this important human trait, the not unsimilar devotion in the dog shows that such a transfer is in fact biologically possible.

Now Lorenz makes a very interesting observation about the attachment of a dog to his master;

The “sealing of the bond”, the final attachment of the dog to one master, is quite enigmatical. It takes place quite suddenly within a few days, particularly in the case of puppies that come from a breeding kennel. The “susceptible period” for this most important occurrence in the whole of a dog’s life is, in Aureus dogs, between eight and eighteen months, and in Lupus¹ dogs round about the sixth month.

One must not attempt to press an analogy or parallel too far; but it should be observed, I think, that here, in an animal, we see something occurring at a phase in development which is not altogether unsimilar to the almost sudden “conversion” that occurs in the religious life of many human adolescents. Be that as it may, the faithfulness, love and devotion of a dog for his master or mistress shows us the same elements that make up the essentials of man’s attitude to his personal God. The nature of God remains for us a great mystery; we realize that the conception of a parent-like Person is but a childish notion, to help us to have some idea of a much greater truth we cannot yet understand. By experience—as recorded in many examples in lectures III and IV—we (those who are religious) feel help in our lives *as if* from a person; some power for a fuller life comes to us in response to a confidence we place in this strange element when we make an approach

¹The terms Aureus and Lupus refer to two main types of dogs: the former, according to some authorities, having more jackal “blood” and the latter more wolf “blood” in their ancestors (a theory of origin by no means generally accepted).

as if to a person. This is the power that William James speaks of as "*objectively true*". "Disregarding the over-beliefs, and confining ourselves to what is common and generic", he says, "we have in the fact that the conscious person is continuous with a wider self through which saving experiences come, a positive content of religious experience which, it seems to me, is literally and objectively true as far as it goes." It is the power which, in L. P. Jacks's words: "can help, deliver, illuminate and gladden the soul . . . the companion of the brave . . . the God who is spirit, the God who is love."

The point on which I want to end this discussion is this: the act of *submission* to this Power is nothing to be ashamed of. It is indeed a blasphemy to speak of it as if it were only a form of sexual deviation. I do not think it likely, either, that it is just a sublimation. We should not be dismayed to realize that it *is* in part related to an act of filial love; whilst that no doubt provides the personal element, it is also, perhaps equally, in part related to the love of beauty in nature which may suddenly strike us to the depths. It is an act of devotion to some fundamental element beyond the self which we may rightly call God. And this mystery, I believe, is as much a part of the natural world as is the psychic side of animal life; it is part of the biological system, and as important as sex. If in our private lives, or in a place of worship, we feel we can approach this hidden Power with a greater sense of divine reverence in a physical act of obeisance, as on our knees, we should not, I believe, feel it to be a childish act. Religion is not rational, it is essentially emotional; if it is to be real and to work, it must be as deep and sincere as human love. Without such sincerity, or emotion, faith if you like, it makes *no* response at all; with the right approach, however, lives can be transformed, seemingly impossible tasks achieved, and the drabness of the world turned to joy. Religion is at the heart of civilization.

LECTURE VIII

THE IMPORTANCE OF PSYCHICAL RESEARCH

In my previous course of lectures I devoted one of them to discussing the possible biological implications of telepathy and other kinds of extra-sensory perception if they should be proved to be a reality. I now want to go further and refer to the whole range of phenomena which are studied under the heading of psychical research and to say why I consider them to be so significant for our religious outlook; I believe they are even more important here than in the realm of biology.

If it could be proved beyond doubt that any one of the alleged kinds of extra-sensory perception were a reality, then it would be a serious challenge to the present-day scientific monism. It is, of course, still possible that these means of cognition might be brought within the monist system by some physical mode of transmission, but there are reasons, I believe, as I shall presently explain, why this seems to be unlikely¹. This is what makes these researches, to my mind, the most important of any that man has yet undertaken. It is true that the exploration of outer space which is now beginning is far more exciting, and even calls for greater courage, than the conquest of the poles or of Mount Everest, yet it only promises to give us more knowledge of the physical cosmos, valuable as that will be. Psychical research appears to be offering us something of quite a *different order*—so different indeed that most of our contemporaries refuse to take it seriously.

In my earlier lecture on the subject I discussed four main reasons for this indifference, or in some cases hostility. They are (1) that

¹I should, however, draw attention to two most interesting and original papers relating to this problem which have appeared since this lecture was given. One is on "Time and Extrasensory Perception" in the *Proceedings of the Society for Psychical Research*, vol. 54, pp. 249-361 (1965) by H. A. C. Dobbs who develops the hypothesis of a two-dimensional time and of the existence of "psitrons"; the other, on "Some Recent Theories of Mind" in *Biology and Personality*, edited by Professor I. T. Ramsey (Blackwell, 1965), is by J. R. Smythies who suggests a duality (or plurality) of spaces.

experiments in psychical research cannot yet give strictly repeatable results; (2) the detection of fraud in many so-called demonstrations of psychic phenomena; (3) that investigators may be emotionally eager to get positive results, on either philosophical or religious grounds, so that they are likely to be unconsciously biased in the interpretation of their results; and (4) the belief that the results claimed are clearly impossible and so not worthy of the time spent in their study. I admit the force of the first three of these arguments, but I will not again go over the arguments that I have previously¹ used in dealing with them. They undoubtedly make the investigations more difficult than any in ordinary scientific research; they are, however, obstacles to be overcome, challenges to be met, and not reasons for retreat. We shall only advance if we recognize them as we try to explore this almost forbidden land—*forbidden only*, I believe, by prejudice. Particularly dangerous is the third difficulty I have mentioned. My very pleading for the importance of this subject makes me suspect, for I am likely to be biased; we must not be blind to these issues, but seek to meet them.

If psi-phenomena, as they are now often called, do *not* fit into the material-physical system then they must have a profound meaning for both religion and philosophy; they would not only throw light, either directly or indirectly, upon the vexed question of the mind-body relationship, but would break once and for all the supposed scientific grounds for the materialism which now grips the world. Their existence would establish that there *is* a dualism of material and mental elements. This would alter the whole intellectual atmosphere and again admit the reality of a non-material, spiritual if you like, part of the universe in which the religious yearnings of man could find a place; it would be like supplying air to a fire which is now only dimly flickering for lack of it. The divine flame would burn again with a new light.

So intrenched in its materialism is this age of today that very few of its scientific exponents will take note of the psi-phenomena at all, or, if they do, they ignore them because they imagine that their more orthodox lines of investigation are more interesting and important. It is some of the philosophers, as I said in my previous lecture, who have taken the trouble to look into the evidence, and there I quoted from the writings of Professor H. H. Price, formerly Wykeham Professor of Logic at Oxford, and of Professor C. D. Broad who until recently

¹*The Living Stream*, pp. 236-9.

was Knightbridge Professor of Moral Philosophy at Cambridge. They have both expressed their conviction of the reality of the phenomena and of their great importance. Professor Price says:

Telepathy is something which ought not to happen at all if the Materialistic theory were true. But it does happen. So there must be something seriously wrong with the Materialistic theory however numerous and imposing the *normal* facts which support it may be.¹

And Professor Broad:

... There can be no doubt that the events described happened and were correctly reported; that the odds against chance-coincidence piled up to billions to one; and that the nature of the events, which involved both telepathy and precognition, conflicts with one or more of the basic limiting principles. ...

It seems to me fairly plain that the establishment of paranormal precognition requires a radical change in our conception of time, and probably a correlated change in our conception of causation.²

I shall not attempt to deal with the evidence for these phenomena in any systematic way, that would be impossible in an hour. Whilst I shall refer to some examples and give the references to where the full evidence is to be found, it is more my intention to emphasize the present extraordinary relationship of the intellectual world to these investigations, one which I believe is of no little significance. Our western civilization has today as fixed a "frame of mind", if one can so speak of it, as had the mediaeval world, but in a different direction. Professor Henry Sidgwick, another eminent Cambridge philosopher, who was one of the founders of the Society for Psychical Research said in its first Presidential Address in 1882:

... it is a scandal that the dispute as to the reality of these phenomena should still be going on, that so many competent witnesses should have declared their belief in them, that so many others should be profoundly interested in having the question determined, and yet that the educated world, as a body, should still be simply in the attitude of incredulity.

Since that date this pioneer Society under a long line of distinguished Presidents, has, through its members, carried out investigations with the highest standards of scholarship in this difficult field,

¹*The Hibbert Journal*, vol. 47. pp. 105-13, 1949.

²*Philosophy*, vol. 24, pp. 291-309, 1949.

and published close on a hundred volumes of research.¹ Now, eighty-four years after Henry Sidgwick's address, the scepticism or indifference of the intellectual world is practically unchanged, except for one class of phenomena, which I shall mention in a moment; I think it is true to say, taking into account the expansion of the universities, that the proportion of qualified scholars taking an active interest in this research is no higher today than it was then. I hope there are none who still imagine, as some have done in the past, that psychical research is simply a synonym for spiritualism; some of the Society's members rightly undertake to investigate the claims of mediums who believe they receive messages from the dead—for the problem of a possible survival of personality (however remote that possibility may seem to be) must not be ignored—but that is only a fraction of its field of work.

I would like to make better known the objects of the Society for Psychical Research, or S.P.R. as I shall refer to it, which have been unchanged since they were laid down in the opening *Proceedings* of 1882. The following are the first words of this first volume:

It has been widely felt that the present is an opportune time for making an organised and systematic attempt to investigate that large group of debatable phenomena designated by such terms as mesmeric, psychical and Spiritualistic.

From the recorded testimony of many competent witnesses, past and present, including observations recently made by scientific men of eminence in various countries, there appears to be, amidst much illusion and deception, an important body of remarkable phenomena, which are *prima facie* inexplicable on any generally recognised hypothesis, and which, if incontrovertibly established, would be of the highest possible value.

Then after some details of the Society's organization, it gives the following subjects that have been entrusted to special committees for investigation:

1. An examination of the nature and extent of any influence which may be exerted by one mind upon another, apart from any generally recognised mode of perception.
2. The study of hypnotism, and the forms of so-called mesmeric trance, with its alleged insensibility to pain; clairvoyance and other allied phenomena.
3. A critical revision of Reichenbach's researches with

¹Fifty-four volumes of the *Proceedings* and forty-three of the *Journal*, with various occasional monographs.

certain organisations called "sensitive", and an inquiry whether such organisations possess any power of perception beyond a highly exalted sensibility of the recognised sensory organs.

4. A careful investigation of any reports, resting on strong testimony, regarding apparitions at the moment of death, or otherwise, or regarding disturbances in houses reputed to be haunted.

5. An inquiry into the various physical phenomena commonly called Spiritualistic; with an attempt to discover their causes and general laws.

6. The collection and collation of existing materials bearing on the history of these subjects.

It is seen that hypnotism, then usually known as mesmerism, was second on their list of subjects for study¹. This is so far the one and only kind of such phenomena which has yet received general scientific acceptance; and this because it was realized that it had important medical and psychological implications. I was interested to learn recently that it has now come to light that Freud was so impressed with the evidence of the Gilbert Murray telepathy experiments (which I referred to in my lecture in the previous series) that he was prepared to give greater importance to the subject in his scheme of psychology if he had not met with such strong opposition from some of his colleagues². It would seem as if some of the phenomena of hypnotism are related to those met with in other fields of psychical research; most of these hypnosis effects appear to be as little understood as are the latter phenomena and are likely, when better known, to give much help in the problem of the mind-body relationship. Under hypnosis a subject can be made to see an hallucination which appears to be as solid as a normal visual perception. He may be told, for example, according to the accounts in the literature³, that on waking up he will find—say—a kitten sitting on the arm of his chair and that he will fondle and pet it; sure enough on coming out of induced trance he behaves as if he is stroking such an invisible "creature" and will

¹Much of the pioneer work was done by members of the S.P.R.: cf. the Reports of the Committee on Mesmerism in the *Proceedings of the S.P.R.* vols. I and II (1882-4) and several papers by Edmund Gurney in the first five volumes.

²Ernest Jones: *The Life and Work of Sigmund Freud*, Vol. III, p. 409, 1957.

³The examples given here are from *Hypnosis, Fact and Fiction* by F. L. Marcuse, Professor of Psychology in Washington State University. But for many research papers see *The British Journal of Medical Hypnotism*, and especially Vol. 10 pp 35-42, and Vol. II, pp 41-47, (10th 1959).

describe its appearance as if real. Full hallucinations of persons known to the subject may similarly be made to appear in the case of particularly good subjects. The whole visual field appears to be reconstituted in detail just as in the imagined field of a vivid dream. Even more disturbing is this: a subject will be told under hypnosis that on waking up he will *not* see Mr. X; now when Mr. X does come into the room the subject is said, by this suggestion, either to reconstruct the whole background of the scene so that Mr. X appears invisible or that in the place where Mr. X stands or moves there is a blank white silhouette with no features on it. This means, of course, that the figure must be perfectly well seen by the eyes and visual mechanism *but then* censored somewhere in the mind. These phenomena appear to be well attested in the appropriate medical journals but I do not believe they are properly understood and they are only very rarely discussed in biological or general scientific circles. Is this, I wonder, because strong subconscious resistance to their philosophical implications?

These hypnotic hallucinations, as far as one can tell from the literature, appear to be of the same kind as those which are said to be seen by some people either in a moment of shock or, it is suggested, by some form of telepathy, at the same time as someone very dear to them has suffered an accident, or some sudden crisis or death. There are a large number of apparently very well attested records of such cases¹, but they are mostly anecdotal and none I think could be regarded as coming up to the standard of *absolute proof* of a telepathic connection. There are a few cases reported where A has made an experiment to make himself appear to B at some distance away and when B, without knowing of the intended experiment, has described the appearance of an apparition of A in his room at exactly the appropriate time. While apparitions seem to be phenomena similar to hypnotically produced hallucinations, occasionally, according to some well authenticated records, they appear to have been seen by more than one person at the same time. Now whilst the many records of apparitions being seen in relation to the death or accident of some distant person, may not provide *absolute proof* of such a telepathic-like relationship, the character of much of the evidence is such that these cases deserve far more consideration than they generally receive.

¹*Phantasms of the Living*, by E. Gurney, F. W. H. Myers and F. Podmore, 1886. See also the Report on the Census of Hallucinations by Professor Sidgwick's Committee: *Proceedings of the S.P.R.*, vol. x, pp. 25-422, 1894; and Mrs. Sidgwick's "Phantasms of the Living": *ibid*, vol. xxxiii, pp. 23-429, 1922.

It is of interest to note that there are examples reported where a reflection of an apparition has been seen in a mirror in exactly the same way as I believe has been claimed in the case of some hypnotically produced hallucinations¹. Perhaps the best study of these phenomena in general is G. N. W. Tyrrell's *Apparitions*. I quote from a preface to the revised edition of this book (1953) written by Professor H. H. Price:

The tea-party question, "Do you believe in ghosts?" is one of the most ambiguous which can be asked. But if we take it to mean, "Do you believe that people sometimes experience apparitions?" the answer is that they certainly do. No one who examines the evidence can come to any other conclusion. Instead of disputing the facts, we must try to explain them. But whatever explanation we offer, we soon find ourselves in very deep waters indeed.

I cannot attempt to lead you into this deep water here and I should be useless as a guide, but you should study the evidence of those who have penetrated a little way into this remarkable mental field. A field, let me say again, no less strange or worthy of exploration than that of outer space.

Before leaving the subject of apparitions, however, I will mention one matter of some interest. In the early days of psychical research Sir William Barrett called attention to the records of people dying who see visions of dead relatives just before death². Recently Dr. Karlis Osis in America has obtained much more evidence for this by means of a questionnaire sent to a large number of doctors and nurses. He found that³ "substantial numbers of the dying, while still in a state of clear consciousness, experienced hallucinations consisting for the most part of visions of their already deceased relatives. Apparitions perceived as having come to take the patient away were specially prominent among those occurring immediately before the end. These experiences seemed to take place largely independently of the patient's educational background, religious beliefs, or type of illness" (a summary quoted from D. J. West's *Psychical Research Today*, p. 53, 1962). There can be no doubt that they actually occur; my own doctor gave our family evidence of an aunt's vision of her late husband on the day she died. They will, of course, be thought most likely to be hallucina-

¹Professor Hornell Hart, *The Enigma of Survival*, 1959, p. 179.

²Examples, with further references, are given in his book *On the Threshold of the Unseen*, 1917, pp. 158-60.

³*Deathbed Observations*, Parapsychology Foundation, New York, 1961.

tions conjured up by the hopeful expectations of those dying who believe in an after life. (There are a few cases, however, which might appear to tell against this hypothesis as when the dying person sees a vision of someone whom he or she thinks to be still alive but who has in fact already died.)

But I have strayed too far from the well attested cases of psychiatric, hypnotic hallucinations I was speaking of. I want now to mention certain other hypnotic occurrences which possibly link with psychical research and certainly are important in regard to the mind-body relationship. It is well to look at these phenomena, which are accepted as realities by the medical profession although their underlying mechanism is still quite unknown. I quote the following brief account from Dr. D. J. West's *Psychical Research Today*:

There is . . . evidence of skin reactions caused by mental influences, for instance, the induction of blisters by hypnotic suggestion. This is a very rare phenomenon, but Dr. J. A. Hadfield, a London psychiatrist, reported a case that he observed personally under hospital conditions¹. The subject was a seaman who was suffering from combat hysteria. Under hypnosis, Dr. Hadfield touched his arm lightly with a finger, telling him at the same time that he was being touched with a red-hot iron, which would cause a blister. The man winced violently, and slowly a blister formed, under which there accumulated a large quantity of fluid, giving the exact appearance of a blister by heat. Dr. Hadfield also tried the opposite experiment, touching the arm with a hot steel rod, at the same time telling the man he would feel no pain. The heat was sufficient to raise small blisters, but they were painless, they healed abnormally rapidly, and there was no surrounding area of redness such as ordinarily appears around a painful heat blister. More recently, another London psychiatrist, Dr. R. L. Moody, reported the case of a female analytic patient who, in the course of her treatment, relived in her imagination incidents in early life when she had been cruelly beaten. While this was happening, weals appeared² spontaneously on her body, corresponding to the places where once she had been hit.

The fact that the mind and emotions can influence what are generally thought to be physical events, albeit parts of the body associated with the mind, is surely of special interest in relation to

¹*The Lancet*, 1917, II, p. 678.

²*ibid*, 1948, I, p. 964.

the mind-body problem. It certainly surprises me that my biological colleagues do not take more notice of these curious occurrences.

From time to time in history there has been recorded the religious phenomenon of the so-called stigmatization when skin haemorrhages are said to occur on the hands and feet of certain devout persons in imitation of the wounds of the crucifixion. Many such cases are probably faked to give an impression of sanctity, but one, that of Louise Lateau, was investigated by the Belgian Academy of Medicine which issued a report confirming the reality of the bleeding¹; her arm was sealed up in a glass cylinder and kept under observation when blood was seen spontaneously to ooze through the skin of the hand.

I must now turn to telepathy, the transmission of ideas from one mind to another by other means than the use of the ordinary physical senses. I will only deal with it very briefly because I treated it more fully in one of the lectures of my first series. There I expressed the view that it was unlikely that such a remarkable capacity should be present in only a few individuals of just one species of animal; it seemed to me more likely that it would be widespread, if unconscious, in the animal kingdom and so of considerable biological significance. I described some of the evidence for the telepathic transmission of designs in the drawing experiments of Birchall and Guthrie at Liverpool and the elaborate thought patterns received by Gilbert Murray in his experiments at Oxford. I expressed more interest in such communication rather than the experimental card guessing which has bulked so large in more recent work, but I don't wish to under-rate the value of the latter. Long before the use of Zener cards by the Rhine school some very striking successes were scored in similar experiments made by Sir William Barrett using ordinary playing cards as described in the first volume of the *S.P.R. Proceedings* (1882).

To give some further examples in the telepathic transmission of drawings I should mention those reported by the novelist Upton Sinclair in his book *Mental Radio* (1930); with striking success his wife was able to reproduce drawings similar to those made by her brother-in-law some thirty miles distant. The resemblances were far too good to be due to chance coincidence, but Dr. W. F. Prince, who was the Research Officer of the Boston S.P.R. made control tests with batches of drawings made by other people to show that chance could not normally produce comparable results. Another remarkable series of drawing experiments was made by the late Mr. Whateley Carington

¹Thurston, H., *Proceedings S.P.R.*, vol. 32, 1922, pp. 185-7.

and described in his book *Telepathy*. On ten successive nights at 7 p.m. he exposed a drawing in his study, a different one each night, now perhaps a ship, then perhaps a gun and so on, each one remaining in the room which was kept locked until 9.30 next morning; and each night he had a group of collaborators all living at a distance, 251 of them, who undertook to draw what they thought was the subject of the design displayed. Ten such tests made one experiment, and then after a gap another set of ten tests would be made as experiment 2 and so on. He did eleven such experiments involving over 2,000 drawings. The drawings were all dated and then all those from any one experiment were shuffled and sent to an outside referee for matching with the shuffled originals. It was then found that if, say, a ship had been a target drawing in one experiment there were significantly more ships in the batch of drawings obtained in that experiment than in any other; but what was very unexpected was that whilst more ships were drawn on the night the ship design was displayed there were also many ships drawn both before and after the night in question.

Similarly with other designs—guns, flags, etc. The results appeared to show precognitive as well as retrocognitive telepathy: the successes were scattered to right and left of the target in time, increasing as the target hour approached and falling off again. What does this mean? If true—and there appear to be too many examples now to doubt it—is it not more remarkable, I will say again, than any physical discovery on the surface of the moon.

Of the spontaneous cases of telepathy there are an enormous number of well attested examples in the publications of the S.P.R. but it is always difficult to assess them, for one cannot apply statistical tests. Some of the most remarkable are instances of shared dreams where two, or in one case three, persons had exactly the same dream on the same night¹.

The success of telepathy experiments over considerable distances does not lend support to the supposition that they might be mediated by some electro-magnetic physical wave system at present unknown, for there appears to be no falling off in the scoring between short and long distant card guessing trials as one might expect from the "square of the distance" law which applies to such physical forms of radiation. The known electrical charges in the nervous system are also far too weak to provide the energy for such a system. Furthermore the

¹Hornell Hart: *The Enigma of Survival*, pp. 236-8.

elaborate thoughts and detailed designs transmitted as in the Gilbert Murray or the drawings experiments would have to be sent by some code system and we know of no organ in the brain which seems a likely seat for such coding or decoding as would be necessary. In a series of Russian experiments recently described by Professor L. L. Vasiliev¹, Professor of Physiology at Leningrad, it is claimed that hypnotised subjects were sent to sleep and awakened by telepathic means when both agent and subject were enclosed in metal cages designed to prevent the passage of electro-magnetic waves².

I have already just touched on precognition in mentioning the results of Whately Carington's telepathy experiments. It was these results of his that led to a very striking discovery. For many years Dr. S. G. Soal had been carrying out telepathy card tests with several subjects on the same lines as those of Rhine but without any positive result. Carington told Soal of his time displacement results and urged him to re-examine all his data to see if any such effect could be observed. Very reluctantly, for it meant an immense amount of work, he agreed and discovered that, by far beyond chance results, two subjects, Mr. Basil Shackleton and Mrs. Gloria Stuart, were scoring successes not on the actual card aimed at but on the one behind it or the one before it; when he came to retest them in a new series of experiments Mrs. Stuart had given up her displacement and now got high scores on the contemporary target, whereas Mr. Shackleton now only scored significantly on the card ahead. Many variations were made in the Shackleton experiments, in one experiment the speed of calling was accelerated to twice the normal speed and in this case he now scored highly not on one card ahead but on two cards ahead; it appears that his phase of precognition was just about 2 seconds ahead of our normal time sequence³.

So far I have emphasized that we should examine and weigh the evidence for extra-sensory perception because it suggests the existence of a non-physical part of the world which may provide a location for man's mental and spiritual experiences. I would go further and suggest we should do something more. However impossible the case should appear at first sight, I believe we should also examine the evidence for the alleged survival of human "personality" after death. Could

¹English translation: *Experiments in Mental Suggestion*, 1963.

²In relation to this paragraph I should call attention to the footnote on p. 176.

³A full account of the experiments will be found in *Modern Experiments in Telepathy*, by Soal and Bateman, 1954.

a reasoning mind, using the symbols of linguistic thought, function apart from the association centres of the brain? On the face of it it would indeed seem impossible—particularly in the light of our knowledge of the cerebral cortex and the effect of surgical removal of large parts of it upon the personality of the patient for whom such a drastic “operation” has been necessary. The survival of personality, is, of course, an intrinsic doctrine of *orthodox* Christian theology; a *natural* theology, however, cannot accept such doctrines without a closer examination.

Few dare to mention it, for fear of being branded spiritualists, but there is, in the publications and files of the Society for Psychical Research some very remarkable evidence (I am referring to the best of the cross-correspondence cases) which, I believe, if examined in a court of law, would be held to demonstrate one or other of two things: either the survival of *some part* of a personality, or a degree of telepathy with living agents which is quite beyond anything yet demonstrated by the experimental method and, indeed, of quite a different kind. Such a finding by a court would not, of course, be proof acceptable by science of the reality of either, but it would point to something worthy of further research. Natural theologians must have the courage of those philosophers and scientists who, ignoring the possible ridicule and contempt of their colleagues, have risked their reputation to look at these phenomena.

Linguistic thought was developed to enable man to deal with the material world; but it would appear that such verbal expression does not usually take a part in dream structure. Need we assume, however, that *if* survival occurs at all it must necessarily be of a verbally reasoning kind? It would be fantastic, but perhaps just possible, I suppose, to conceive, if the evidence for survival *should* be overwhelming, that some such non-linguistic dream-like personality might be able to manifest itself to us verbally, with difficulty, in some extra-sensory fashion through the speech centres of a medium, or those controlling writing. It is well to recall that the mystics can rarely express the rapture of their experience in linguistic terms and artists find it easier to depict their joy in colour, shape or sound than describe it in words. Creative writing, I believe, is much harder work than painting; an author is using his cortex to express and reason out what he feels on another level. Perhaps Shakespeare *was* right and, in our fundamental nature, we really are “such things as dreams are made of.” Perhaps in depth we *do* belong to a world of Polanyi’s “tacit”

knowledge¹ and feeling to which the reasoning mind by itself is almost blind; a world which little children find it easier to imagine and to enter than do their verbally encrusted and over-pedantic elders. Such an apparently absurd idea is almost certainly far from the truth, but to have some imaginative picture in mind, however wrong, helps to combat the perhaps too pessimistic concept of sheer impossibility which would prejudice our judgement from the start. We must have an open mind.

It is well, perhaps, before going any further to remind ourselves that there is so much that is yet a puzzle, scientifically a puzzle, in regard to the human mind that we should not have preconceived ideas. To do this let me quote a brief passage from Aldous Huxley's *Heaven and Hell*.

How and why does hypnosis produce its observed effects? We do not know. For our present purposes, however, we do not have to know. All that is necessary, in this context, is to record the fact that some hypnotic subjects are transported, in the trance state, to a region in the mind's antipodes, where they find the equivalent of marsupials—strange psychological creatures leading an autonomous existence according to the law of their own being.

About the physiological effects of mescaline we know a little. Probably (for we are not yet certain) it interferes with the enzyme system that regulates cerebral functioning. . . .

Similar intrusions of biologically useless, but aesthetically and sometimes spiritually valuable material may occur as the result of illness or fatigue; . . .

From the point of view of an inhabitant of the Old World, marsupials are exceedingly odd. But oddity is not the same as randomness. Kangaroos and wallabies may lack verisimilitude; but their improbability repeats itself and obeys recognizable laws. The same is true of the psychological creatures inhabiting the remoter regions of our minds. The experiences encountered under the influence of mescaline or deep hypnosis are certainly strange; but they are strange with a certain regularity, strange according to a pattern.

I have said that we must examine the evidence for survival, and not just that of past alleged communications, but new evidence which we should seek. Nothing could be more difficult; it is a field strewn

¹Discussed on p. 39f.

with hazards in which we must walk with the greatest caution, feeling our way forward step by step. Let me say at once that I am not here concerned at all with the alleged so-called *physical phenomena* of spiritualism, where some mediums claim to produce ghostly figures in the dark, move objects, beat tambourines or drop flowers into the laps of those attending such séances. The great majority of such mediums who have been examined critically have been detected in fraud; and since the introduction of the infra-red camera which can take pictures in the dark not one has accepted an invitation to be so examined¹. I am here dealing with something quite different from the supposed happenings of the dark séance room. I am concerned with those who, in broad daylight, in trance, apparently unconsciously, produce either verbally or by automatic writing—and often among a lot of seemingly subconscious ramblings—some very remarkable statements which cannot just be brushed aside as irrelevant; they give information which could not, apparently according to most careful investigation, have been known to the medium by normal channels and which concern a person now dead. If the information is obtained unconsciously from the mind of some living persons it points, as I have already said, to a degree of telepathy quite unknown in other fields of such research; it would be quite exceptional because it would mean that the information must be collected from more than one other mind and pieced together into a coherent pattern apparently by the subconscious mind of the medium. The difficulties are formidable whichever view we take; the establishment of either, or the discovery of yet another unforeseen explanation must add greatly to our knowledge of the nature of mind and personality.

I will only very briefly indicate the nature of the evidence from the cases of the so-called cross-correspondences which I regard as so important; to make any assessment of their value they must be studied in detail preferably in the *Proceedings of the S.P.R.*² itself, or if time cannot be afforded for this, then in the excellent concise account by Mr. Saltmarsh³. Frederick W. H. Myers, the poet and classical scholar, and Fellow of Trinity College, Cambridge, who was one of the founders of the S.P.R. and author of the book *Human Personality and its Survival*

¹I will not deny that there have been mediums who, according to strong evidence, have produced what have *appeared* to be levitations of an object or person in a well lighted room; but this may be due to hypnotic hallucination.

²Volumes xx-xxxvi.

³*Evidence of Personal Survival from Cross-Correspondences* London, 1938.

of *Bodily Death*, died on January 17th, 1901. Two other close friends and fellow co-founders of the S.P.R. had already died before him: Edmund Gurney in June 1888 and Professor Henry Sidgwick in August 1900. It was this group, and one or two others who were said to have joined them, who were claiming to communicate and to try and establish the fact of survival by giving, through a number of different people using automatic writing¹, various cryptic allusions which when fitted together would solve a literary or classical puzzle.

The term automatist may conveniently be used to distinguish this type of mediumship, if mediumship it be, from other kinds. Some automatists go into a drowsy state suggesting a semi-trance, others like Mrs. Piper would go into complete trance letting her head lie over on a cushion whilst her hand wrote on a table; some, however, appear to retain full consciousness and can read a book whilst the hand writes, and yet others write as if taking down dictation—the words and sentences, they say, seem to come into the mind from outside.

One of the automatists taking part was Mrs. Verrall, a lecturer in classics at Newnham and wife of Dr. A. W. Verrall, a well-known Cambridge classical scholar. She was a member of the Council of the S.P.R. and had taken up automatic writing for some time. Another was a Mrs. Holland who had begun automatic writing when in India but who returned to England in 1904 when she met Mrs. Verrall. A third was a "Mrs. Willett",² a friend of Lord Balfour who himself was keenly interested in the tests; her automatic writing was in a script quite different from that of her ordinary hand. There were several

¹Now for those who are not familiar with automatic writing I should give an explanation. It was originally done with a little instrument called a planchette which is an egg-shaped board with a downwardly pointing pencil at its narrower end and two little wheels at its wider end; this will glide over a sheet of paper tracing a line with the minimum of effort when the fingers are lightly placed upon it. The operator should not direct its movement *consciously*; after it has made a lot of scribbling doodles it may, if practice is given to it, begin to write words which at first appear to be nonsense but then, with more persistence, may form coherent sentences. It was then found that a planchette was not necessary and that such automatic writing could be done by simply holding a pencil in the limp hand and allowing it to doodle "as it wishes" without any attempt to control it. Now these written sentences are in themselves no evidence of any spirit control. A great many people can do automatic writing with a little practice; it is known to be a means of getting the subconscious mind to express itself and is in fact extensively used in some psychological laboratories. The messages which purport to come from deceased personalities are interjected amongst such writings.

²"Mrs. Willett" was a pseudonym adopted by Mrs. Combe Tennant who was related by marriage to Myers.

others, including Mrs. Verrall's daughter, who made up a group of interested amateurs, but to them must be added Mrs. Piper of Boston, U.S.A., perhaps the most famous trance medium yet investigated. Mrs. Piper had been working for several years for members of both the S.P.R. and its American equivalent and she came to England from November 1906 to June 1907 specially to give sittings related to the scripts which were being obtained by this amateur group.

Let me sketch the type of puzzle said to be set. The writings of automatist A would contain certain cryptic passages suggesting, say, some classical allusion which was quite meaningless to the writer; then a little later another apparently meaningless passage would appear in the script of writer B; and eventually, after going through the voluminous scripts of the different writers, it would only later be found that C had produced some other curious phrases which could now be seen to link together the sentences produced by A and B to give a sensible, if sometimes subtle, solution to the puzzle. It was often of a kind which might well be propounded by a classical don, but quite lost on the automatists except Mrs. Verrall. There are not just one or two of these cross-correspondences but dozens of them, some relatively simple, others very complex; the scripts in which they occur occupy hundreds of pages in the *Proceedings of the S.P.R.* and there is still much material yet to be published. It would be impossible here to give sufficient of the evidence to enable you to have a fair view of it; I merely wish in the time available in the one lecture I can devote to psychical research to point to the nature of this problem which faces us. For those who have not taken a look at the literature I would recommend as an introduction, in addition to Mr. Saltmarsh's book that I have already mentioned, the detailed report on the so-called case of The Ear of Dionysius by the Right Hon. G. W. Balfour¹.

Here certainly is a mystery. It is not as if all these people were deceiving themselves in their interpretation of the scripts obtained; all the evidence of the scripts is there for us to judge. We cannot believe that the whole thing is a gigantic hoax—the Piltdown skull and other impostures have been produced by one or two people; but here, if all the scripts are faked, it involves a large number of people, not only the script writers but people like the Hon. Gerald Balfour, Sir Oliver Lodge, Mrs. Sidgwick, Mrs. Salter and many more. If we rule out fraud it would seem that it can only be one or other of the two solutions already mentioned. Either it is what it is claimed to be in

¹*Proceedings of the S.P.R.*, vol. xxix, 1918, pp. 197-286.

the scripts themselves, communications from persons who are now dead, which to some may seem impossible on rational grounds; or it must be a complex system of *telepathic* communication between the *subconscious* minds of different people so that it results in a coherent scheme which must presumably have been hatched in the subconscious mind of one of them.¹ I am not prepared, without more evidence, to say which I think is likely to be the right answer; I can, however, observe that if we decide that the second solution seems the more likely then I think we must agree that it opens up such an entirely new concept of the human mind and its interrelationship with other minds that perhaps we no longer have quite the same rational grounds as we had for rejecting the other alternative! This is why I call it a great mystery and why I believe that psychical research, when it has gone much further, will have a profound contribution to make to man's view of the place of his mind in the universe.

There are other striking examples, apart from the cross-correspondence cases, which by strong evidence seem to suggest survival such as the Vandy case² or that of Mrs. Talbot³. There are others, however, which tell against it, such as the supposed messages purporting to come from entirely fictitious characters which had been invented by the investigators for the purpose of testing the mediums in question⁴. Then there is the remarkable account of the "spirit" of Gordon Davis which would appear to have been obtained by telepathy from the mind of the investigator; it was remarkable for two reasons, firstly because G. D. was later found to be still alive and secondly some most curious evidence of precognition was involved in it⁵. These and a host of other problems, which we cannot here discuss, only emphasize the difficulties of this field of investigation.

Let me briefly recall one or two other arguments for and against the idea of survival. Modern psychologists are showing to what a great extent our behaviour is influenced by our unconscious emotional needs; some would say that most, if not all, psychic phenomena are produced by the unconscious of the percipient in response to hidden

¹It has been suggested that it might have been the subconscious mind of Mrs. Verrall who alone had the classical knowledge necessary; she, however, died in 1916 whereas the automatic writing of the other automatists continued with very little difference in the character of the scripts (see p. 134).

²S.P.R. *Journal*, vol. xxxix, 1957.

³*Proceedings of S.P.R.*, vol. xxxi, p. 253.

⁴Cf. the Bessie Beales case: *Proceedings S.P.R.*, vol. xxviii, pp. 177-8, 1915.

⁵*Proceedings S.P.R.*, vol. xxv, pp. 471-594, 1926.

desires such as "craving for comfort in bereavement, for having marvellous experiences, for attracting attention by telling astonishing stories, for rationalizations of religious beliefs, to show superiority by deceiving other persons . . . or the like¹." These must certainly be taken into account.

Perhaps one of the greatest of our rational difficulties is that of imagining another world in which a surviving personality could exist in any reasonable way. This, of course, is obvious but I sometimes wonder if some people who talk about a spirit world have stopped to consider just how difficult such a conception is. It is well brought out in Dr. L. P. Jacks's Presidential Address to the S.P.R. in 1917². He is speaking of the impossibility of imagining natural objects in the next world:

Let me illustrate my meaning by one of those far-fetched suppositions which, just because they are far-fetched, are the less likely to encounter our prejudice. Suppose we were credibly informed by any means you choose to imagine, that a rose, a single flower fully formed, had been discovered on the planet Mars. How Science would leap to her feet on receiving the information! . . . A planet which can produce a rose must be able to produce ten thousand other things from the same conditions, and science could tell us in general what they are. . . . But now suppose that just as this reconstruction was about to begin we were suddenly confronted with a new and unexpected piece of information. "This rose of Mars," we will imagine our informant to say, "is not what is commonly meant by the word. It is a mystic rose . . ."

. . . A rose which survives in another world without a tree, without air, and without sun, is not a rose at all, but something else called by the same name; still less can it be the identical rose that grew in my garden yesterday.

If you remind me that the rose of the next world *once* had the soil, the air, and the light of this, and that, having had them once while it was on this earth, that suffices to maintain it as a rose in its new sphere of being, so that it can now get on without them—if you tell me this, I must say with all respect that though you have made a delightful fairy tale, to science it is nothing but nonsense. . . .

¹Professor Hornell Hart, *The Enigma of Survival*, p. 249.

²*Proceedings S.P.R.*, vol. XXIX, 1918, pp. 287-305.

The question of the possibility of the survival of human personality after death is partly empirical and partly philosophical, says Professor C. D. Broad in an essay published as an epilogue to his Perrott Lectures on Psychical Research delivered at Trinity College, Cambridge in 1959 and 1960¹. It is empirical, he says, in that it can only be answered by making the right kind of investigation, like the question: "Does a bit of copper survive being dissolved in nitric acid?" This is what the psychical researchers are trying to do. It is philosophical, he says, in the sense that the phrase "survival of bodily death by a human person" is by no means clear and unambiguous; the purpose of his essay is to clear up this point. I can only attempt the merest sketch of part of his argument. To understand what is involved in the survival of a human personality we must first be clear what we mean by a *human person*. He is a psycho-physical unit having intimately inter-related bodily and mental aspects; he is at once a *physical object* having material properties and a *psychical subject* having experiences, being in fact aware of himself doing this or that. We speak of him having a body which he calls *my* body, and a mind he calls *my* mind. We speak of Mr. Jones's body and Mr. Jones's mind, but we must remember this is a unique use of the possessive case and not on a par with Mr. Jones's hat or even Mr. Jones's nose; if we thought them the same we might imagine Mr. Jones losing his body, his mind or both, as he might lose his hat or nose, and still exist.

Whilst physical and psychical identity generally go together, it is conceivable that physical identity might be accompanied by psychical diversity and *vice versa*. Whilst uncommon, there are cases known where one body is associated with two or more personalities in turn. And millions of people in the East accept the doctrine of reincarnation: of one personality being associated with different bodies in a time sequence. With some mediums who go into trance we may find one or more personalities associated with his or her body "who claim" to be identical with those who once occupied different bodies of their own.

The psychic aspect of a normal person combines in a most intimate way three main features:

- (1) A stream of experience, including rememberings, but with numerous gaps of sleep.
- (2) All his dispositions: his desires, emotions, schemes, ideals etc.
- and (3) the feeling of his body, influencing it and being influenced by it, and in having what we may call a *perceptual central point*.

¹Lectures on Psychical Research, 1962.

Before considering possible survival after death we should consider occasional breaches in continuity during life. Dreamless sleep is such a gap. But dream experiences are very important. They show that the human being has within him the means of producing an extremely elaborate, coherent and sustained sequence of hallucinatory quasi-perceptions as of an environment of things and persons in which he is living, acting and suffering, although at the time he is not having the externally initiated sensations, which are the basis of normal working perception. This, says Broad, is relevant to the question of the possibility of survival—man might carry this mental mechanism with him, and so continue in a kind of dream world. We should note that dreams, *unlike waking visual imaginings*, are often as vivid as scenes in real life.

I should mention here two kinds of phenomena which are related to dreams and which are fully discussed by Professor Broad in his earlier lectures in the same book: the so-called lucid dreams and out-of-the-body experiences. The former may briefly be described in Broad's own words:

In a lucid dream, the dreamer is at the same time perfectly well aware that his physical body is asleep and quiescent, and quite differently located and oriented from the body which he is ostensibly animating in his dream. On awaking he remembers with equal distinctness both the actions of his dream-body and the simultaneous quiescence and passivity of his physical body. Such a dream seems to be halfway between an ordinary dream and the extraordinary out-of-the-body experiences in which a person appears, as if in full consciousness, to leave his body and then return to it. There are now many detailed accounts of this condition; I will again quote Broad's description:

The essential feature of these experiences is this. The experient has what appear to him at the time to be ordinary sense-perceptions of actual things and persons (including very often his own physical body), from a point of view located in the ordinary space of nature outside the position occupied by his physical body at the time. Generally he appears to himself to be provided with a kind of secondary body, resembling his physical body more or less closely in shape, size, and outward appearance, but much more plastic and less ponderable. This is believed by some of the experients to be normally located within (or, perhaps more properly, to be infused throughout) the

physical body; but to be capable on occasion of issuing from the latter, of reorienting itself, and of travelling to considerable distances whilst retaining some kind of extended *quasi*-material link with the physical body. On such occasions the main consciousness of the individual in question is often (but not always) felt by him to be "centred in" this secondary body, in the sense in which it is felt to be "centred in" one's ordinary physical body in one's normal waking life.¹

To return to Broad's epilogue essay, he stresses how difficult it is to conceive of a personality surviving in an entirely disembodied state. "Speaking for myself" he says "I find it more and more difficult, the more I go into concrete detail, to conceive of a person so unlike the only ones I know anything about, and from whom my whole notion of personality is necessarily derived, as an unembodied person would inevitably be."

If survival be conceivable [he says], then I cannot but think that the least implausible form of the hypothesis would be that, at any rate immediately after death and for some indefinite period later, the surviving personality is embodied in some kind of non-physical body, which was during life associated in some intimate way with the physical body. If so, I should think it quite likely that many surviving personalities would—as Swedenborg alleges that they do—at first, and for some considerable time afterwards, confuse this non-physical body with their former physical one, and fail to realize that they have died.

If we are to postulate a "ghost in the machine", and it seems to Broad to be the *sine qua non* for the barest possibility of the survival of personality, then we must ascribe to it some of the *quasi-physical* properties of the traditional ghost.

He later makes (on p. 416) a striking analogy:

Nowadays we have plenty of experience concerning physical existents which are extended and in a sense localized, which have persistent structure and are the seat of rhythmic modulations, which are not in any sense ordinary bodies, but which are closely associated with a body of a certain kind in a certain state. One example would be the electromagnetic field associated with a conductor carrying an electric current. Or consider, as another example, the sense in which the performance of an orchestral piece, which has been broadcast from a wireless

¹*Lectures on Psychical Research*, p. 167

station, exists in the form of modulations in the transmitting beam, in places where, and at times when, there is no suitably tuned receiver to pick it up and transform it into a pattern of sounds. . . .

Any analogy to what, if it be a fact, must be unique, is bound to be imperfect, and to disclose its defects if developed in detail. But I think that the analogies which I have indicated suffice for the following purpose. They show that we can conceive a form of dualism, not inconsistent with the known facts of physics, physiology, and psychology, which would make it not impossible for the dispositional basis of a human personality to persist after the death of the human being who had possessed that personality. . . .

And this is his final paragraph:

To conclude, the position as I see it is this. In the known relevant *normal and abnormal* facts there is nothing to suggest, and much to counter-suggest, the possibility of any kind of persistence of the psychical aspect of a human being after the death of his body. On the other hand, there are many quite well attested *paranormal* phenomena which strongly suggest such persistence, and a few which strongly suggest the full-blown survival of a human personality. Most people manage to turn a blind eye to one or the other of these two relevant sets of data, but it is part of the business of a professional philosopher to try and envisage steadily both of them together. The result is naturally a state of hesitation and scepticism (in the correct, as opposed to the popular, sense of that word). I think I may say that for my part I should be slightly more annoyed than surprised if I should find myself in some sense persisting immediately after the death of my present body. One can only wait and see, or alternately (which is no less likely) wait and not see.

That also is my position, except that I should certainly not be annoyed to find myself surviving. We must know much more about the psychology of mediumship before we can come to any decision about this difficult problem. I am convinced, however, with Professors Broad, Price, Sidgwick and many others who have examined the evidence that the phenomena of extra-sensory perception are sufficiently well attested to show that the present widely held materialistic-monistic conception of the universe must be false.

LECTURE IX

A PLEA FOR THEOLOGY TO BE MORE NATURAL

In this lecture I am stepping into what is strictly a theological field. I want in fact to plead that theology should become more natural. I explained in the first lecture of my former series that I was neither trained as a theologian nor as a philosopher, but had accepted the lectureship as a scientist and naturalist; I then promised that I should not trespass very far into such philosophical fields without seeking guidance. My argument in this lecture will be developed around the views of different theologians and will to a large extent consist of quotations from their works; it may almost be regarded as a kind of anthology drawn from the writings of theological authorities.

Perhaps some may feel that as a Gifford Lecturer I should not be saying some of the things I am going to say; if so I would remind them again of the terms of Lord Gifford's will in making the bequest. "The lecturers", he said, "shall be under no restraint whatever in their treatment of their theme," and "they may freely discuss all questions about man's conceptions of God and the Infinite, their origin, nature and truth." Indeed, as a Gifford Lecturer, I feel it is my duty to defend the concept of Natural Theology against the attacks that have been made upon it from within certain camps which may claim a degree of orthodoxy.

Karl Barth opened his celebrated Gifford Lectures on *The Knowledge of God and the Service of Man according to the teaching of the Reformation*, which he delivered in Aberdeen in 1937 and 1938, with a challenge to Lord Gifford's purpose. Since, according to the foundation, the lectures have to be about some aspect of Natural Theology he only accepted the invitation to give them on the understanding that he could use them to present the case for what he called Reformation Theology in open opposition to Natural Theology.

Let us see how he opens his first lecture. After a few preliminaries, reminding his audience of Lord Gifford's intentions, he says:

I feel that more than one, though perhaps not all, of those who in the past have given these lectures must have had to rack their brains over these requirements of Lord Gifford's, but I am sure that to none of my distinguished predecessors have they given so much trouble as to me.

Permit me to state at once quite frankly the reason for this. I certainly see—with astonishment—that such a science as Lord Gifford had in mind does exist, but I do not see how it is possible for it to exist. I am convinced that so far as it has existed, and still exists, it owes its existence to radical error. How then should I be in a position to further and to spread it? Further, the difficulty with which I am faced, so far as I understand the matter, does not lie merely in the personal opinions which I happen to possess. It lies in a circumstance much more important and compelling than any private opinion—namely, in my calling as a theologian of the Reformed Church . . .

He goes on to stress that the only way in which he can lecture on Natural Theology is to enter into vigorous controversy with it. In his synopsis he says he can:

. . . confer on "Natural Theology" (note the inverted commas!) the loyal and real service of reminding it of its partner in the conversation. If it wishes to achieve its end in the sense used by the testator it has at least to enter into controversy with this partner, in opposition to whom it must make itself known, prove itself and maintain itself as truth—if it is the truth!

I will now give another quotation from the middle of his course to show further his opposition to natural theology:

In accordance with what we have already heard [he says] what do we mean by knowing God? It has become clear that it is not a matter of observing, analysing, considering and judging an object, where the knower is permitted to consider himself disinterested, free and superior in his relation to his object. Knowledge of God, according to the teaching of the Reformation, consists, as we have seen, in the knowledge of the God who deals with man in this Revelation in Jesus Christ. Knowledge of God according to the teaching of the Reformation does not therefore permit the man who knows to withdraw himself from God, so to speak, and to maintain an independent and secure

position over against God so that from this he may form thoughts about God, which are in varying degrees true, beautiful and good. This latter procedure is that of all natural theology. One can only choose between this and the procedure of Reformed theology, one cannot reconcile them.

Karl Barth's theology is perhaps the extreme example of dogmatic theology in modern times. Since it is so opposed to Natural Theology and to all of Lord Gifford's intentions I feel I need have no hesitation in taking up the challenge and replying to it on behalf of our great testator. There can be no doubt that the voice of Karl Barth has made a great impact in the theological world. Let me now quote the opening paragraph of a volume published as a tribute to him, *Reformation Old and New* (1948), edited by the Rev. Dr. F. W. Camfield:

That in Karl Barth a religious portent of arresting significance had appeared was perceived even in the English world, which has the reputation of being somewhat slow to recognize such things, at a comparatively early date. Certainly at first the disposition was to regard it as a quite ephemeral phenomenon looking no more than a symptom of that irrational revolt which, in the years following the War of 1914-18, swept over well-nigh the whole of European life both outwardly and inwardly. Civilization was a failure, Liberalism was bankrupt. Progress was an illusion. How could theology hope to escape from the universal shaking? . . . A tottering world could scarcely be without its angry prophets. Were they not therefore to be expected within the sphere of the Church? But the forces of equilibrium would soon assert themselves, and the wild cries of men in revolt would be lost in the winds of the passing storm.

As he goes on to show, however—and the other contributors to the volume confirm it in equally vivid terms—the dogmatics of Barth were in fact received with open arms by so many who had appeared to find the natural theology of the past a discredited philosophy. The opinions of biologists who could only see evolution as a materialistic process, and of psychologists who saw the Freudian super-ego as the full explanation of Deity, had shattered any hope they may once have had of a new natural theology being the basis of their belief. They still had religion in their hearts, and, as so often in matters of emotion, the heart is stronger than the head; they decided that since the free intellect appeared no longer to give reasonable support to the certainty they felt, they must seek a different basis for their faith. Karl Barth supplied

this. He seemed to offer the only alternative to reason: a return to the Reformation concept of a dogmatic trust in the scriptures as truly the written word of God. "Who is God?" asks Barth, and goes on to reply:

Reformed teaching in principle does not answer this question by any free thought, *i.e.* as if the question had been raised and had to be answered by man himself. On the contrary, it answers it on the basis of God's own revelation. That is, it answers it from the standpoint of man who has been told by God himself, in the Person of Jesus Christ, who God is.

Let us see how Karl Barth has swayed so many in the Church to turn against the more liberal ideas for which Lord Gifford stood. I will take just two examples from the many authors contributing to the volume that I have just mentioned.

The editor, the Rev. Dr. F. W. Camfield, writes:

The Christian Church can under no circumstances attribute to God the abstract and objective nature, which every synthetic statement that God "is", in a word, every natural theology, would imply. It cannot, that is, think of God as the goal of man's thought and perception, as a reality reached at the end of man's own interpretation of the world of his experience. The God reached in that way is not God, but an idol. The whole existence of the Church is bound up with the analytic character of the statement that God "is". That is to say, the Church's existence is bound up with the postulate that one does not end with God but must begin with Him. No man therefore can say "God is" to himself. The Church cannot say it to itself. No simple statement about God, the God who really "is", can be made except on the ground that God has spoken first, except on the ground of God's own being as manifested and revealed in His works and ways. The Church speaks about God not through the exigencies of thought but through the imperative of command. . . .

Man is a living, thinking, acting being, and to this living, thinking, acting being the Word of God is addressed. But since the Church really speaks to man about God, since to speak is its commission, the command laid upon it, it can in no sense debate with him about God. That is to say, it cannot treat God as, so to speak, half subject of address to man and half object of man's investigations, but must speak of Him as wholly sub-

ject . . . Is not then the man to whom the Word of God is addressed called upon to abdicate as a thinker after all? By no means. Since "God is", in the great analytic and not in the synthetic sense, man is legitimized and justified as thinker before God as he follows out to their conclusions, the implications of the Word of God given in revelation.

This is extreme fundamentalism—man is to base his philosophy and all his thoughts about his ultimate nature upon the scriptures alone.

Or here is what the Rev. T. F. Torrance says:

. . . Calvin called natural religion a "shadow religion" over against the manifestation of God, and Karl Barth, who has championed the Reformed rejection of natural theology today, has called it "the shadow-side" of the Revelation of God. Barth has been seriously misunderstood here, but, in his essential position, he is not different from Calvin. He warns us, for example, . . . that our rejection of natural theology must not be any kind of metaphysical denial; rather must it be grounded only upon the actual event of grace as setting it completely aside for faith. There is no room whatever for it in a Christian theology precisely because a Christian theology has to do with a new creation.

Let us now recall what Calvin himself said about natural theology, and I take the quotation from Karl Barth:

In order to know God, therefore, we must not frame a likeness of Him according to our own fancy, but we must betake ourselves to the Word, in which His lively image is exhibited to us. Satisfied with that communication, let us not attempt anything else of our own . . . How ridiculous is the blindness of men when they claim anything for themselves; for they gain by their boastings just as much as if some small creatures, such as locusts, would elevate themselves by leaping; but they must immediately fall back again upon the earth.

Karl Barth is certainly at one with Calvin in this, and for this reason his doctrines are sometimes spoken of as the Neo-Calvinism.

It has indeed come as a shock to many of us, with the more liberal outlook, to realize just how strong and far reaching has been his impact upon current theological thought.

Let me now quote the Bishop of Woolwich in his recent paper-back—*The New Reformation?*:

I am *not* suggesting [he says] an abandonment of the Christian gospel nor a substitution for it of a pure humanism. Neither am I proposing simply to turn my back on a theology of revelation and replace it with a "natural theology" which begins with the pre-suppositions of human nature and hopes to arrive at Christianity from them. That would be to go back on all that my generation in theology has learnt. It is not for nothing that we have been to school with Karl Barth, Emil Brunner and Reinhold Niebuhr. Indeed, if there is a phrase which provides a bridge across into the theology I am concerned to advocate it is Karl Barth's own recent title "the humanity of God". There is nothing further from its spirit than an air of self-confident humanism. Its call is rather to go with Christ outside the camp, to be with him in his humiliation.

Why is natural theology now held in such contempt by so many theologians? A generation ago F. R. Tennant's great two-volume *Philosophical Theology*, especially the second volume which deals particularly with natural theology, was, I understand, the standard reading on the philosophy of religion for most students of theology; today it stands, I am told, unread on the shelves of college libraries. That other great contribution to a more philosophical theology of the same period, William Temple's Gifford Lectures of 1932-33; *Nature, Man and God*, has had, I believe, a no better fate. The very first essay in the recent Cambridge book *Soundings: Essays Concerning Christian Understanding* edited by Dr. A. R. Vidler, concerns the present position of natural theology, and is by the Rev. H. E. Root, University Lecturer in Divinity at Cambridge. In his opening paragraph he says: "Most people who think about these things at all agree that natural theology is in a poor state. Vivian Smart has aptly called it 'the sick man of Europe.' Everyone has his own ideas about the reasons for this *malaise*. Not everyone agrees that it is unfortunate." Towards the end of his essay he makes, I think, a very fair estimate of the situation:

... we can be in no doubt that what we have to face today is a divorce of natural theology from the mind and imagination of the most sensitive segment of our society. The disengagement of theology from imagination is all but complete. ... Theologians and ecclesiastics who realize the problem at all have a way of stating it which obscures half of its significance. They speak as though the loss were wholly on the side of the secular world and mind. They talk about the debility of much modern

philosophy, the poverty of modern art and literature. They attribute these things to the fact that the modern mind is cut off from its roots in religion and faith. There is point in these observations. What the apologists and theologians less often notice is the debility and poverty of our modern theology, which results from its disengagement from the deepest sources of intellectual and artistic creativity. The loss is sustained on both sides. On the side of theology we see it less clearly. Our conception of natural theology, tied to obsolete models, allows us to forget that the inspiration for natural theology must reach men at the deepest levels of thought and imagination. The dilemma is this: theologians cannot redraw the picture until they regain contact with those ranges of thought, feeling and imagination which now live a life—even for the Christian believer—quite independent of theology.

Natural theology must begin with the natural world, the external world in which we live and the internal world which gives our life and experience its impetus and shape. . . . And finally he says:

Academic theology has lived on its own fat. The supply of fat is running out . . . It will take decades or generations before we know whether natural theology still has enough life in it to seek new kinds of nourishment. . . . To try new foods always means taking a chance. Some of those who try it may be poisoned. That is the risk. Natural theology can no longer survive on the food of its fathers; the supply is exhausted. It has several choices; no one quite knows the nutritional or toxic properties of any of them. There is only one way to find out.

In the end, any plea for the restoration of natural theology must be an appeal to boldness. We shall have to contemplate and absorb the disturbing visions of human nature which find expression in serious modern literature. . . . Our first lesson will be to learn that our greatest ally is not the dying establishments, but the hungry and destitute world which is still alive enough to feel its own hunger. The starting point for natural theology is not argument but sharpened awareness. For the moment it is better for us that the arguments have fallen to pieces.

Here I am sure he puts his finger on the crucial point. We have argued and theorised too much without being fully aware of the facts.

We must first build up our great natural history of religious experience from many different fields—from biology, anthropology, sociology, psychology and psychical research and so on—before we reconstruct our natural theology. This lack of an adequate background of facts is the reason, I believe, for the decline in the prestige of the subject. Its principal exponents in this century have tried to make it a meta-physical system.

To illustrate this failure of what is usually called natural theology at the present time, let me refer again to what I believe are regarded by most theologians as the two most important works on the subject in the last half century: F. R. Tennant's *Philosophical Theology* and William Temple's *Nature, Man and God*. The approach of the two scholars is entirely different—so much so that Temple makes no reference at all in any one of his Gifford Lectures to Tennant's work: he does, however, explain why he makes this omission in his Preface and it is very illuminating. I quote as follows:

One serious omission among authorities mentioned seems to call for explanation. I have nowhere referred to Dr. Tennant's great book *Philosophical Theology*. But his method of approach is so different from mine that I thought it would be more misleading than illuminative to draw attention to the many points on which I am happy to find myself in agreement with his conclusions. The difference is fundamentally one of epistemology; but this difference leads to another affecting the use of religious experience as part of the data to be handled in the enquiry.

My purpose has not been to construct, stage by stage, a philosophical fabric where each conclusion becomes the basis for the next advance. I fully recognize the value of that method of thought, though I believe it to be more fruitful in exposition than in enquiry. For I am persuaded that the initial "certainties" of that method are bound to be abstractions, so that the cogency and clarity of the argument is purchased at the cost of detachment from actuality.

The arguments of Tennant are indeed built step by step upon speculative metaphysical premisses that could I believe never satisfy any mind that had a truly scientific outlook. His chapter entitled "The Empirical Approach to Theism: Cosmic Teleology" will be regarded as anything but empirical by a scientist. Yet he seems to think that he is basing his argument on actuality.

Natural Theology [he says] sets out from facts and inductions;

its premisses are as firmly established and as universally acknowledged as any of the stable generalizations of science. Here there is at least common ground, as distinct from private certitude, from which argumentation may proceed. Coercive demonstration being confessedly unattainable, it is to be inquired what kind of justification for reasonable belief natural theology can afford, and the first step is to set forth the facts and generalizations which collectively constitute our data or premisses. (p. 79)

What do his "firmly established and universally acknowledged premisses" amount to? This is how he sets them out in regard to his Cosmic Teleology:

The main fields of fact in which adaptation is conspicuous, and which have severally afforded data for particular arguments of the teleological kind and of restricted scope, are those of the knowability or intelligibility of the world (or the adaptation of thought to things), the internal adaptedness of organic being, the fitness of the inorganic to minister to life, the aesthetic value of Nature, the world's instrumentality in the realization of moral ends, and the progressiveness in the evolutionary process culminating in the emergence of man with his rational and moral status. A brief examination of these fields in turn will not only enable us to estimate the respective strengths of the more or less independent arguments derived from them severally, but also to appreciate the interconnexions within the world, and the comprehensive teleology which such interconnectedness suggests. (p. 81)

Taking them together he regards them as conclusive of a cosmic teleology; as he discusses each one in turn, however, we see how metaphysical the arguments may be and how unscientific they are in conception.

Let us now turn to Archbishop Temple's *Nature, Man and God* and look for a moment again at the Preface in which he contrasts his own method of procedure with that of Tennant.

My own endeavour [he says] is rather to provide a coherent articulation of an experience which has found some measure of co-ordination through adherence to certain principles. The endeavour is exposed to perils of its own, because the experience may contain illusions, and the analysis can never be carried to an ideal limit; but as far as it is successful it has the advantage of contact with actuality at every stage. I do not claim that my

method is the best, or only really sound, method of philosophical thought. But I claim that it is legitimate and that it has certain merits of its own.

Again we see that, although based upon quite different and I believe more acceptable foundations, this is essentially a philosophical rather than a scientific or truly empirical approach. The main burden of Temple's book is to emphasize the need for a natural theology yet at the same time to show that such a theology cannot provide a substitute for actual religion. That indeed we have already stressed several times in our course—theology is not the same as religion, but a natural theology should, we said, embrace a systematic knowledge and theory of religion. Let us see how Temple ends his last lecture:

. . . Natural Theology, which is indispensable as a source of interpretation and as a purge of superstition even for those who have received a true revelation, yet if left to itself, ends in a hunger which it cannot satisfy, and yet of which it must perish if no satisfaction is forthcoming. . . . Natural Theology ends in a hunger for that Divine Revelation which it began by excluding from its purview. Rightly sifting with relentless criticism every argument, it knows what manner of Voice that must be which shall promise relief to mankind; but the Voice is not its own, nor can it judge the message that is spoken. "Come unto me . . . and I will give you rest"; it is not Philosophy that can estimate the right of the Speaker to issue that invitation or to make that promise; that right can be proved or disproved only by the experiment of life.

In one sense I am in complete sympathy with Temple's outlook—but in another I find him a bit unfair to the natural theology which I have in mind—and which I am sure Lord Gifford also had in his. We do not suppose that natural theology can supply us with the Divine Revelation itself—it should aim to be the science of man's relations and reactions to that Revelation. Optics, the branch of physics studying light, does not *give* us the *experience* of light itself, but tells us a great deal about the reactions of both inanimate and animate things to such radiation. I should never suppose that natural theology could be *itself* the means of giving us religious experience—any more than I should suppose that the most dogmatic so-called orthodox theology could give any such experience. I would only say, however, that for the scientifically trained and more modern mind, a natural theology should be able to show that to believe in the existence of religious

experience is reasonable, and in keeping with what else one knows about the natural world.

To say that "natural theology ends in a hunger for that Divine Revelation which it began by excluding" is to my mind to misconceive it as a science—no science in the true sense of the word hungers after anything. Such a statement also misconceives natural theology on another side; it should never exclude Divine Revelation, surely that is its main subject matter. Temple himself would seem to show this at the very beginning of his course; he says a true natural theology should *not* exclude consideration of records of religious experience contained in the holy books of any religion. It is true that he begins by contrasting the older views of natural religion and revealed religion; he does so, however, in his first lecture in this way:

The truth quite plainly is that the distinction between Natural and Revealed Religion or Theology is in no way directly concerned with the content of the beliefs examined, but solely with the principle determining the method of examination. So far as any doctrine is accepted on authority only, such acceptance lies beyond the frontier of Natural Theology, and all conclusions drawn from the belief so accepted must be excluded from its sphere. But the fact that a doctrine forms part of a dogmatic system, which is itself based on utterances regarded in some quarters as beyond all criticism, cannot exclude that doctrine from the purview of the Natural Theologian, provided that he considers it, or proposes it for acceptance, independently of such authority. (p. 7)

In passing let me just quote Archbishop Temple's views on Karl Barth's dogmatics:

The error of the Barthian school of theology—for that it contains error when judged by the canons of either natural reason or Christian revelation I cannot doubt—is, like every other heresy, an exaggeration of truth. To deny the reality of moral progress, or that moral progress is in increasing conformity to the Divine is wanton. To deny that revelation can, and in the long run must, on pain of becoming manifest as superstition, vindicate its claim by satisfying reason and conscience, is fanatical.

Before I leave Temple's thesis I would like to point out one, to me, most interesting feature. In his Preface he writes:

At one time I thought of giving to these lectures a descriptive sub-title: *A Study in Dialectical Realism*. But that might suggest

an ambition to inaugurate a philosophical tradition suitably so designated. I have no such desire. But I believe that the Dialectical Materialism of Marx, Engels and Lenin has so strong an appeal to the minds of many of our contemporaries, and has so strong a foundation in contemporary experience, that only a Dialectic more comprehensive in its range of apprehension and more thorough in its appreciation of the interplay of factors in the real world, can overthrow it or seriously modify it as a guide to action. I certainly have not supplied that more comprehensive and more thorough Dialectic; but I have sought to make a contribution towards it.

It was only quite recently, while reading in preparation for this lecture, that I came across Archbishop Temple's view in regard to this and I was much excited by it because without realizing that he had published this in 1934—I wrote in my first lecture of the earlier series thus:

I know, of course, that dialectical materialism is very different from old fashioned so-called classical materialism, but it is nevertheless atheistic in outlook; I am not entirely without hope that in time, with the development of a natural theology in harmony with a scientific outlook, it may not come to drop the "materialism" in favour of a dialectical theism.

Temple shows that Dialectical Materialism is indeed nothing like as completely materialistic as its name would suggest. On his p. 487, after discussing the idea of the intimate interrelation of spirit and matter which I cannot go into here, he writes:

There is reason to think that this conception of the intimate unity of spirit and matter affords the chief hope of securing for the spiritual an effective control over matter throughout any period now worth considering. This may surprise those who recognize it as closely akin to the so-called Dialectical Materialism of Marx, Engels and Lenin. But a close examination of this Dialectical Materialism, strongly distinguished as it is by its upholders from Mechanistic Materialism, suggests that its own dialectic will destroy its character as materialist, except in so far as it is opposed to the idealistic view of matter as existing only "for mind". Dialectical Materialism so called, asserts the temporal priority of matter, as we have been led to do; it regards mind as appearing within matter, as we have done; it asserts that mind, so appearing, acts by its own principles,

which are not reducible to the categories of physics and chemistry; while mind is regarded as originating in, and out of, what is material, it is not itself regarded as identical with matter. What is postulated by this view is not an identity of mind and matter, but a unity of mind and matter; to present mind and matter as identical is condemned as Mechanistic Materialism. (pp. 487-8)

A little later he writes:

Our starting-point is therefore, as has been stated¹, nearer to Materialism than to Idealism. It is indeed closely allied to that Dialectical Materialism which Marx and Lenin adopted as the philosophical basis of Communism. This Dialectical Materialism is avowedly drawn from Hegel by a conscious invasion of the logical Dialectic which was his chief contribution to philosophical method. But Marx and Lenin, though insisting on the contrast between Dialectical and Mechanistic Materialism, and on the distinct reality of mind and its processes, yet limit the activity of mind to reaction, according to those processes, to situations presented by the material order, so that mind is always secondary and dependent. We found on the contrary that the distinguishing feature of mind is its capacity for free ideas, and for directing its attention to those ideas apart from any material occasion for doing so.

Because of our insistence on this point our method might fitly be named Dialectical Realism. For starting with a realist view of the physical universe we were led to consideration of the fact that the world-process gives rise to minds, which themselves are capable of free ideas; and this in turn led us forward to a position which in its positive content is almost identical with such Idealism as that of Edward Caird or of Bernard Bosanquet, apart from the method of arriving at it. For after repudiating the priority of mind *qua* knowing subject as a precondition of the actuality of the objective world, we were led to re-affirm the priority of mind *qua* purposive as the only condition of the intelligibility of the same objective world.² Thus Realism becomes a basis for a spiritual interpretation of the universe, and the Materialism of our empirical starting-point is balanced by the uncompromising Theism of our conclusion. (p. 498)

¹He refers to his p. 198 where he discusses the origin of mind with consciousness.

²See his lecture x.

I am greatly in sympathy with Temple's approach but I believe it suffers, and has not made the impact it might have done, just because it is more philosophical and metaphysical than scientific. If, as I have been arguing, we can make theology as much a science as is psychology—and it will certainly be most closely related to psychology—then I believe Dialectical Materialism might well become converted into a Dialectical Theism.

It is still widely held that the scientific method cannot be applied to the subject matter of natural theology. Let me now quote from the Rev. G. F. Woods, another Cambridge Lecturer in Divinity¹, who also writes in that book of essays *Soundings*. He is discussing the idea of the transcendent:

It is now widely assumed that the transcendent is beyond the limits of our possible experience. It is supposed that we are imprisoned for life within the confines of human experience and that this experience can never include an experience of the transcendent . . . It is said that we can never understand the idea of the transcendent because it lies beyond the forms of thought. . . . We can have no idea of it. And even if we could form an idea of the transcendent, we cannot prove that it exists because it lies outside the realm in which we can devise proofs and organize tests. We cannot know *what* it is and we cannot prove *that* it is. The idea is withering like a leaf in autumn and it will fall and decay when winter comes.

This outlook and temper have consequences which are discouraging for traditional Christian theology, both natural and revealed. Natural theology, understood as the knowledge of God which may be derived from a study of nature by the natural reason, loses its persuasiveness. It does so . . .

[now this is the point I want to draw attention to]

It does so [he says] because no way seems to be available of passing from the natural order to what may lie outside that order as its cause or ground. The various forms of explanation which are appropriate and adequate in explaining for example the working of a television set lose their ordinary meaning when they are used to describe how the natural world came into being. Revealed theology is also virtually precluded. In the absence of a confident Natural Theology, there is no reasonable belief in a God who may choose to reveal himself. There is no prepara-

¹He is now Professor at King's College, London.

tion of the mind to receive or expect a divine revelation . . .¹

This failure to see how a "confident" natural theology could be logically possible is due to the failure to realize that there can be an application of the scientific method to other than material things. Physics and chemistry are not the whole of science; but I have discussed this already in the first lecture of the present series (p. 25)—we can apply the scientific method to analyse behaviour without assuming the unproven hypothesis of materialism. We have also seen in lecture v (p. 125) how Professor Sir Cyril Burt has applied this method in the statistical study of values to show that the good and the beautiful are not just individual subjective judgements but realities beyond the self. So after the collection of an enormous number of observations on the religious experiences of individuals we can begin to see whether or not the evidence points to the existence of some transcendental influence acting upon our lives—such evidence too must of course be correlated with the findings of psychologists. It will take a long time—but the quest I believe need not be regarded as a hopeless one, or even beyond our grasp. Natural theology has failed to make its appeal today because it has presented itself only as a philosophical or metaphysical system based upon hypotheses which have lost their validity in the face of the advance of science.

I have found myself spending most of this lecture on stressing that natural theology must become more truly scientific instead of concerning myself, as its title suggests, with the plea that more orthodox theology should become more natural. My apparent digression has, in fact, been to show that the tendency for so much of theology today to become more dogmatic than natural has been because our natural theology has been too weak; ecclesiastics seeing natural theology apparently withering to the point of death under the cold blast of positivist and humanist thought have clutched at the only support they seem to find: the faith of Karl Barth, and those like him, in the supposed infallibility of the written word. I must now concern myself in what little time remains, with the plea I set out to make.

Dogmatic theology may appear to those who have not the scientific outlook to be the only support now available for a religious faith that they "feel in their bones" to be true. But a religion supported by such dogmatism can no longer appeal to the scientifically-minded modern man. The majority of intellectuals today tend to regard the western world as having passed into the post-Christian era and no

¹*Soundings*: pp 45-46

longer regard themselves technically as Christians. Professor Leuba's questionnaire survey of the beliefs of eminent scholars in America in 1921 (omitting, of course, theologians and ministers of religion) gave the historians at the top of the list of those who believed in God, but even among them only 48 per cent of them believed; the biologists and psychologists came at the bottom of their list with 31 and 24 per cent belief respectively. If such a survey was taken again today I expect that the figures would be much lower. I also believe, however, that few would deny that the Christian environment has been essential for the development of all that Western civilization stands for, including intellectual freedom. There is a danger of losing this if we lose the Christian spirit; and the danger of losing that spirit is greater if current theology tends to be tied to an irrational dogmatism.

For me it is this spirit of Christianity, not any hypothetical dogma of theology, that matters. Evidence of the working of a Divine Power that we may call God, the reality of religious experience, the sense of the sacred, and a belief in the way of life as taught in the Gospel of Jesus—a belief men have died for—these, to my mind, are vital; for me they form a far more substantial foundation for a theology than the blind acceptance of supposed events in the past—events which cannot satisfy the accepted rules of evidence used in other fields of historical research. "Religion", said Dean Inge, "is concerned with that which is and not with that which was." Some of the most beautiful expressions of what I should call the true Christian religion come from an early work by the late H. W. Garrod, Fellow of Merton, who later became Oxford's Professor of Poetry. The quotation I am about to give comes from one of his essays in his book (of 1906) *The Religion of All Good Men*:

There was a great deal of theorising about "the spirit" in the time of our Lord, as we may see from the writings of Philo Judaeus. In the old Hebrew prophets "the spirit" is the power of prophecy. But in Christ's mouth it is the power *both to do and to say*, "I by the Spirit of God cast out devils"—"The Holy Spirit shall teach you what to say." This Spirit is not born with a man, but it is the fruit of works. It is at once the result, and the cause, of holiness. Its function is twofold. On the one hand it is the source of strength, and on the other hand the source of comfort (or counsel). The possession of this spirit and the consequent sense of sonship with God is the central and fundamental thing in the religious life. That it was made thus central and fun-

damental with Christ, we cannot doubt when we see how the earliest Christianity puts the doctrine of the Trinity (into which it had corrupted it) in the forefront of its system. But the Trinitarianism of Christ is pure and simple and illuminating—God and the man, and the Spirit of God working in and with men, by deed and by word, towards a union of the divine and human in which “the son goeth to the Father”. Here at any rate in the teaching of Christ is something that all men can accept, something that none who have once felt the religious principle stirring in them (and no man, if we may believe Plato, can go through life without that experience) can reject. This contrast between the Trinitarianism of Christ and the Trinitarianism of Christianity may serve to illustrate the contrast at all points between the freedom of spirit which Christ achieved and the iron bondage in which so many of his disciples still live. (pp. 78-9)

Whilst I cannot follow Garrod in all of his theological ideas I find that statement of the essence of Christianity one which corresponds most closely to the picture I see emerging from the natural history of religious experience as far as it has gone. It is the vividness of this experience which occurs again and again down the ages and in example after example to be collected in our natural history; it is this which will form the basis of a more scientific natural theology: one which will challenge the more orthodox dogmas.

The orthodox may point to the almost miraculous growth and expansion of Christianity in its early days as an argument in support of retaining old beliefs. It is certain that that expansion was due to an almost superhuman enthusiasm—a brilliant burning of the Divine Flame—a flame kindled and fanned by the spiritual force of the founder, but looking back we should also recognize that its remarkable and fanatical spread was partly due to two illusions. *If* the accounts are true, an honest reading of them, I believe, must make us conclude that Jesus himself was mistaken in encouraging the idea that the end of the world was coming within the life-time of many of those then living. The widespread acceptance of this view and the subsequent legend of the *physical* resurrection of his body—with a promise of a similar resurrection to all believers—these were important elements in the driving forces of this amazing movement with its many martyrdoms. Few scholars with a liberal education can now possibly imagine the *physical* body of Christ still existing in the universe today. To the

modern mind it is no longer a question as to whether or not the legend of the empty tomb can be considered historically true or not; it is just that the idea that the material body of Christ can still be existing as a true physiologically working body, somewhere in outer space, simply does not make sense with the revelations of science. If theology does not mean a *physical* resurrection, and I suspect that a great many churchmen do not really believe it, then it should say so. With the cosmology of two thousand years ago it seemed a reasonable story that, on Ascension Day, the physical body of Christ went up through the clouds to heaven; but it cannot be held by those with a liberal education today. I may be accused of trying to make fun of the Bible—I *am not*; but I am criticizing those twentieth-century theologians who would endanger the acceptance of the transcendent, inspired message of Jesus by retaining quite unacceptable legends from a pre-scientific age. Would the theologians who proclaim the sanctity of the written word of the gospels have us believe Matthew, 27, verse 52?

The tombs also were opened and many bodies of the saints who had fallen asleep were raised, and coming out of the tomb, after the resurrection, they went into the holy city and appeared to many.

How many modern men can believe that legend to be actual fact? A theology that clings to such doctrines must, I am afraid, be thought by the great majority of the scientifically-minded to be frankly a theology of nonsense. We should remember the wise words of St. Augustine written at the end of the fourth century—I quote the translation given by Professor Fairfield Osborn in his *From the Greeks to Darwin*:

It very often happens that there is some question as to the earth or the sky or other elements of this world . . . respecting which one who is not a Christian has knowledge derived from most certain reasoning or observation, and it is very disgraceful and mischievous and of all things to be carefully avoided, that a Christian speaking of such matters as being according to the Christian Scriptures, should be heard by an unbeliever talking such nonsense that the unbeliever perceiving him to be as wide from the mark as east from west can hardly restrain himself from laughing.

Regarding the supposed belief of Jesus that the end of the old order of the world was coming, we have the choice either of believing that he

was mistaken in his views, or, as I think may be true, that the following reports of his words are faulty:

"Verily I say unto you, this generation shall not pass away until these things be accomplished."

"Verily I say unto you, there be some here of them that stand by, which shall in no wise taste of death till they see the kingdom of God come with power."

We know that the gospels as we have them were not written till *at least* a generation after Jesus taught, and that bearing the name of John much later; and that to these gospels, as our scholars assert, many later additions were made. Knowing the fallibility of man's memory and the way that legends grow—knowing too of the disputes and discussions of the early Church—how can the modern mind accept a theology that still either clings to ideas of a past age or insists on the infallibility of the scriptures as the definite words of God?

The late Dean Lowe of Christ Church, not actually referring to the passages just quoted, but to the interpretation of the scriptures in general, had this to say:

Nor can I feel that there is much hope for us in the dialectical neo-Calvinism which exalts the Word of God into a slogan at the cost of completely obscuring what the Word of God is . . . No doubt Karl Barth's interpretation of the Bible is thoroughly theological . . . But . . . the theology seems to me both obscure and defective. We must remind ourselves that a theological interpretation is no advantage if it means the arbitrary foisting of our own inadequate theology into the text. That is one of the things from which the historical critics were rightly trying to escape.¹

Is there not a danger that modern western man be turned away from, and lose, the spirit which gave him his culture—that which Jesus revealed, preached and died for—and which has lived on in spite of all the encrustments added to it by mediaeval theology? With the development of scientific thought and the modern outlook, these old overlying encumbrances appear cruder and cruder; not only have they all but smothered the real message of the gospel, but in their obvious absurdity they tend to suggest that the whole of religion is nothing but a fantastic legend and illusion. Is there not a real danger that because of this we may lose our civilization? This

¹*The Interpretation of the Bible: the Edward Alleyn Lectures, 1943*, Edited by C. W. Dugmore, p. 119.

is why I believe that the building of a scientifically conceived natural theology is both urgent and important.

We must realize that the New Testament is made up of many strands. This is very well brought out in a recent book entitled *Athens or Jerusalem?*, by the Rev. Dr. L. A. Garrard, former Principal of Manchester College, Oxford. He traces, with vivid examples, the clash between Judaistic and Hellenistic modes of thought which began in the very early days of the Christian church and have continued to the present day.

There have undoubtedly been times [he says] when the individual Christian, if not the Church, has been in danger of allowing Athens to supersede Jerusalem, of so letting the Greek element in the synthesis predominate, that the life and message of Jesus have almost ceased to make their impact. . . . Today the danger in Christian circles lies far more in the direction of a too exclusive devotion to Jerusalem. The more the churches seek union with one another, the more inward turning they become. As a result they too often give the impression that they are content to speak the esoteric language of a coterie in which, as Alasdair Macintyre has put it, believer speaks only to believer and all human content is concealed. Although the revival associated with the name of Barth took its start, like Luther's, from the study of Romans, many of its present day exponents are nearer in spirit to the opponents with whom Paul engaged in passionate combat in Galatians. For fundamentally Paul was a liberal, desirous of a church as comprehensive as possible.

Garrard pleads that we should take the best from both Athens and Jerusalem. We must, as he says, recognize that the New Testament is a mixture of different doctrines. As Dr. E. T. Scott says in his study *The Varieties of New Testament Religion*:

It is freely acknowledged by all modern scholars that various types of teaching are represented in the New Testament, but the idea still persists that they are closely related and attempts are constantly being made to fit them together into a single pattern. In the view of the present author this is a mistaken effort and cannot but lead to many false judgements. . . . Freedom of thought belongs to its [Christianity's] very substance, and has done so from the beginning . . .

At the end of his book Scott says:

In that first age the church was divided, as it is now, and the New Testament is in great measure a record of its divisions, and without them could never have come into being. It does not speak for an ideal, harmonious church, such as we dream of, but a church that was constantly divided against itself, like that which we know.

Our natural theology of the future must have freedom of thought and discussion—we must be at liberty to debate theological issues just as physicists can discuss different hypotheses as to the causes of gravity without suggesting that gravity itself does not exist, or discuss the relative merits of the wave or particulate theory of energy without denying the existence of light.

I ask myself whether the leading theologians of the past would have held their views if they had lived today and had had a liberal education?

Would Jesus himself be a Christian? If by the term Christian we mean what so many orthodox churchmen appear to mean, then I, for one, very much doubt it. I feel certain that he would not have preached to us of a God who would be appeased by the cruel sacrifice of a tortured body; the parable of the prodigal son surely belongs to quite a different religion.

What a paradox it is. To me Jesus speaks of reality—the most brilliant burning of the divine flame in all history. Yet I find so much in orthodox Christianity that repels me. I don't want to hurt the feelings of those who think differently and I do not expect them to change their views, but I must state that I cannot accept either the hypothesis that the appalling death of Jesus was a sacrifice in the eyes of God for the sins of the world, or that God, in the shape of his son, tortured himself for our redemption. I can only confess that, in my heart of hearts, I find such religious ideas to be amongst the least attractive in the whole of anthropology. To me they belong to quite a different philosophy—different psychology—from that of the religion that Jesus taught. I am not claiming to be right, but I think there are a great many who share my view and who have turned from religion because of it. In the natural theology I envisage, the different hypotheses would be debated, as in any other field of science, without claiming any to be infallible dogmas.

LECTURE X

A SCIENCE OF THEOLOGY AND AN EXPERIMENTAL FAITH

In this, the final instalment of my two series of lectures, I must try to draw the threads together, sum up the position reached and look to the future. From the beginning I have expressed my conviction that Lord Gifford was right in insisting that theology must be treated as a science "just as chemistry and astronomy are so treated", if it is to win the respect of modern thinking men. But I also said that we must not attempt to set up such a science until we have built up a more extensive and comprehensive natural history of religion.

I refused to accept the idea that the methods of science could *only* be applied to physical material entities. It is true that a science can only be built by making and recording observations through our sense organs or their extensions in all manner of instruments and external recording devices; that, however, need not force us to adopt the quite unproven hypothesis that the universe is nothing but the material one known to present-day physics and chemistry. By our sense organs we can record many different kinds of human behaviour without assuming that they are entirely mediated by material events. I will not admit that the whole of biology can be reduced completely to physics and chemistry. Physiology, yes, for it is a special branch of biology concerned with analysing the actions of living systems in physico-chemical terms and I am sure that everything material in the body can be so analysed; we have no right, however, to assume that there is nothing more in animal life than that, and there is indeed, a great deal to tell against it.

I have insisted (p. 30) that two great branches of biology, ecology and ethology (the study of animal behaviour), can stand on their own feet strictly as parts of science in their own right without being reduced to physical terms. Just as the more physical sides of science are built

up from the statistical study of the movements and interactions of molecules, atoms and smaller particles, so ecology and ethology are using the scientific method by recording in quantitative terms the behaviour of animals as living wholes without necessarily adopting the dogma of materialism. Psychology is a science in the same way: a science of human behaviour, but not, I believe, in the sense of the so-called "behaviourists".¹ The natural theology that I envisage is a science of the same kind: a science of man's religious behaviour. More than a hundred years ago Archbishop Frederick Temple, before natural theology had fallen into disrepute among leaders of the church, saw that this change must come.

Our theology [he wrote] has been cast in a scholastic mould, *i.e.* all based on logic. We are in need of, and we are being gradually forced into a theology based on psychology. The transition, I fear, will not be without much pain; but nothing can prevent it.²

Just as ecology and ethology have become branches of true science because the earlier naturalists prepared the way by collecting a vast array of facts and observations, so, I believe, our future science of theology must be built upon an enormous collection of observations regarding man's religious experience and behaviour. The course of lectures I am now completing has aimed at surveying some of the different fields which should be covered in such a natural history.

There have, I think, been two main obstacles in the way of modern man accepting the reality of the religion he may feel within his heart. Firstly the idea which I believe to be false, that science points to the process of evolution being an entirely materialistic one, which must rule out the possibility of a spiritual side of life; and secondly the belief that Freudian psychology has completely explained away the feeling of Divinity by its concept of the super-ego.

Let me briefly refer again to the first of these two difficulties. So important have I regarded it that, speaking strictly as a biologist, I devoted the greater part of my first series of lectures to a restatement of evolution theory. Unless we can show that the widely accepted mechanistic explanation is unfounded then it is no use trying to proceed further towards a scientific natural theology, because man is certainly a part of this evolutionary process. As I hope I made clear, there can now be no reasonable doubt that the *physical* side of the process is

¹See p. 160.

²Quoted by H. D. A. Major in his *Basic Christianity* (p. 54), 1945.

brought about, as Darwin supposed, by the action of natural selection upon the almost infinite range of variation which, as we have come to see, is caused by the random mutations of the genes and their recombinations; and further that these are shown to be the result of chance chemical changes in their nucleic acid (DNA) molecules. We saw that it was not these chance variations themselves which are governing the course of evolution, for they are tending to vary in almost any direction; it is now generally admitted by biologists that it is entirely the selective forces and not the mutations that are the creative elements in the process. It has however been generally accepted that these selective forces are simply those either of the inorganic environment or of predators and competitors in the struggle for life; so it was thought that the process must be simply a matter of the mechanical interaction of these factors. The main thesis in my first series of lectures was that there was *another* selective force equal in importance to the others or of even greater significance: that of the behaviour and habits of the animals themselves. Now it is generally argued by the mechanists that any such changes in behaviour are brought about first of all by natural selection picking out suitable mutational changes in the nervous mechanism of the animal; that indeed appears to be how changes in habits become built in as instinctive behaviour, but I do not believe they generally arose in that fashion, especially among the vertebrate animals which have a much more flexible range of reactions included in their inquisitive exploratory behaviour.

Terrestrial animals did not first get webbed feet and then take to the water to use them; they took to the water because competition for food on the land became too great and then those members of the population whose mutations produced webbing and gave an advantage in swimming tended to do better than those not so well equipped. I do not think it likely that mutations governing the nervous system made animals not addicted to water take to swimming—I believe that when food was short on the land the *more adventurous* ones took to diving into the water after fish and frogs. It was the same with adaptations for running, climbing trees, digging, flying and so on; new habits developed in the different populations according to opportunity and, as time went on, those members who by chance had slight bodily variations better suited to the new way of life tended to be more successful. But it was *not* chance, mark you, which dictated the change but the new behaviour developed by the ever curious, exploring and

initiating animals themselves. As evolution has advanced we see this behavioural element, this psychic factor, increasing in importance; as brain capacity enlarged, this behavioural kind of selection became a dominating factor and eventually led to tool-making, speech and so to modern man.

I have emphasized that I do not believe that consciousness is confined to man. With the coming of speech, explicit knowledge, conceptual ideas and tradition—together with man's prolonged youth which extends his period of learning—there has developed his personality which is markedly different from anything found among other animals. Apart from these additions, however, which are all so very recent in geological time, man, on his tacit, emotional side is very close to the animals as Professor Polanyi has shown (p. 40). Consciousness cannot be a product of just these later additions—it must be something far more fundamental in the biological system.

In my earlier lectures I hope I made it clear that I cannot accept the views of the mechanists who consider consciousness simply as an epiphenomenon of the material system. In the first lecture of the present series I stressed that I could only regard the present-day monistic views of so many scientists and humanists as exceedingly dangerous for the future of civilization in that it makes man's spiritual side simply the superficial by-product of the material process. This conception I believe to be an entirely unwarranted dogma based upon a false, but widely accepted, mechanistic view of the evolution process. I suggested in that first lecture that this idea was as unreasonable and as dogmatic as any dogma of the mediaeval church; and that it was similarly based upon an entirely prejudiced view, in this case the view that physico-chemical science—biology being reduced to the molecular level—can alone supply us with the truth.

I believe that the kind of evidence from many different sources within the natural history of religion which we have briefly reviewed in this course of lectures gives strong evidence for the existence in man of an element which, while linked to the material system, would not, at any rate at present, appear to be explained by it. Quite apart from such evidence, however, a number of scientists with greater vision are now realizing that the problem of the nature of consciousness, embracing that of the mind-body relationship is one of the most important facing mankind today. I promised to say more about this.

In the last lecture of my first series I gave a quotation from one of Sir Cyril Hinshelwood's Presidential Addresses to the Royal Society

in which he gave much prominence to this problem of consciousness; earlier in the present course (p. 120) I have referred to his fine Eddington Memorial Lecture entitled *The Vision of Nature* in which he stressed the reality of the spiritual and artistic side of man. So important are his views regarding consciousness that I shall here quote him again, but this time from his more recent Presidential Address to the British Association at Cambridge entitled "Science and Scientists"¹. In part of it he has been referring to the conception of molecular codes and the chemical storage of information, arising from work on reproduction, and how these have given rise to speculations about the mechanism of memory or even the mystery of dreams. He then goes on as follows:

But what remains utterly incomprehensible is how and why the brain becomes the vehicle of consciousness. Great heat has sometimes been generated by debates about whether scientists will ever, as has been crudely expressed, be able to make life in a test-tube. The heat at least is wasted. It need change little in our conception of things if they did. Suppose that in the course of centuries the transcendent technical difficulties are overcome, and the appropriate enzymes, synthetic nucleic acids and so on are assembled together cunningly enough and that a cell is constituted. Suppose even that two suitable cells are made and unite and, in an appropriately controlled environment, develop into a man. The inscrutable mystery of the relation between this piece of chemistry and physics and the conscious mind remains precisely the same as if the cells were formed by the biochemical processes of human bodies. Some philosophers have wanted to talk away the mind-matter problem as a verbal confusion. I suspect that at bottom they simply attach no importance to the scientific description of things and are therefore indifferent to any divorce between it and the language which describes the world of conscious experience. If so they are of course entitled to remain indifferent, but men of science presumably do not.

At all the boundaries of science we come against what are probably the inherent limitations of human understanding. At the edge of biology we meet the chasm between what science

¹This address was given later in the year than my Gifford Lectures; I have substituted this quotation for a repetition of one from his former Royal Society address which I actually used in the lecture.

describes and what the mind experiences. In the physical sciences too we encounter insoluble contradictions if we try to contemplate the limits of space or the beginning of time . . . If reality is describable by a four-dimensional space-time continuum why does the time dimension present itself differently to our consciousness?¹

A little earlier in his address he has been discussing the work and views of the late Sir Charles Sherrington. He says:

Family influences interested Sherrington in medicine and he passed by more or less conventional channels into research. He grew up among pictures of the Norwich School, wrote poetry, and it has been said of him that the poet was never deep down. Though he more than any other man elucidated the nature of nervous reflexes, he was strongly opposed to any mechanistic view of the world. "Mind" he wrote "knows itself and knows the world: chemistry and physics, explaining so much, cannot undertake to explain Mind itself."

In the last lecture of my former series, and in the first of this, I quoted from Sherrington's Gifford Lectures *Man on his Nature*; I now take the following from the same work:

. . . mental phenomena on examination do not seem amenable to understanding under physics and chemistry. I have therefore to think of the brain as an organ of liaison between energy and mind, but not as a converter of energy into mind or *vice versa*.

We have, it seems to me, to admit that energy and mind are phenomena of two categories.

When the International Congress of Physiology met in Oxford in 1947 they republished, as a compliment to Sherrington, his great book *The Integrative Action of the Nervous System* which was first published in 1906. Sherrington, nearing the end of his life, wrote a remarkable foreword to this 1947 edition, again emphasizing the apparent duality of mind and matter. He ends with these words.

That our being should consist of *two* fundamental elements offers I suppose no greater inherent improbability than that it should rest on only one.

Let me now turn to the views of Lord Brain—or Sir Russell Brain as he was when he wrote his book *Mind, Perception and Science* from which I take the following:

Our knowledge . . . is symbolic. Our knowledge of the external

¹Science and the Scientists. *The Advancement of Science*, vol. 22, pp. 347-56, 1965

world is based on perceptions which depend upon the physical structure of the sense-organs and nervous system. This in itself constitutes a limit to our perceptions; and it is likely enough that it sets bounds to our thought also. Need we believe that a nervous system evolved to facilitate action upon the physical world is capable of providing conceptual symbols adequate for the whole of reality? He is a bold man who would claim that today.

Then a little later, after explaining that this symbolic representation is only one of the functions of the mind, he says:

I've been almost exclusively concerned with this aspect of mind because it's of fundamental importance in relation to our knowledge of the world, but we must not lose sight of other and equally important mental functions. There are modes of thinking other than the scientific; and memory, emotion, will and self-consciousness could all receive as much attention as we have given to perception and scientific thought.

Neurologists such as Lord Brain are, I believe, demolishing the fashionable and pessimistic views of the modern philosophers such as Ryle, and giving more support to those of the opposite view such as Broad and Price. At the end of his book Lord Brain summarises his views as to the status of mind in the form of a discussion between an imaginary reader and himself as author:

What have you to say [the reader asks] about Ryle's views? Hasn't he finally demolished "the ghost in the machine" and with it many of the functions you evidently attribute to the mind?

It would take too long [he answers] to discuss all the views which Ryle expresses in *The Concept of the Mind*, but I must comment on his ideas about sensation, observation and imagination, since if he's right about these I must be wrong and, incidentally, his approach to these topics will illustrate what I believe to be the fundamental defect of his book.

He (Lord Brain) goes on to demolish, on neurophysiological grounds, Ryle's arguments in regard to these—but I must not follow him further here—I merely want to show that it is the neurophysiologists today who appear, if I may use the expression, to be "on the side of the angels".

Sir John Eccles, one of our leading physiologists of brain action, in his Waynfleete Lectures at Oxford in 1952, to the astonishment of

many, supported the concept of the "ghost in the machine". He in fact believes that the experiments in psychical research—especially those which claim to demonstrate what is called "psycho-kinesis"¹—may well explain the mind-brain problem. He is by no means followed in this by most of his colleagues but he is one of the first to suggest how mind and brain may inter-act. In the same year, in an article in *Nature*², he puts forward his ideas more concisely; while expounding his view that the mind produces changes in the nervous activity of the brain, he says:

It will be objected that the essence of the hypothesis is that mind produces changes in the matter-energy system of the brain and hence must be itself in that system. But such a deduction is merely based on the present hypothesis of physics. If these mind influences were of a nature that precluded their detection by any existing physical instrument, then physicists would be ignorant of them, and the hypothesis of physics would necessarily neglect them. It is at least claimed that the active cerebral cortex could be a detector of such "influences" if they existed.

He goes on to discuss the psycho-kinetic experiments pointing out that if they are indeed revealing facts then there must be an interaction between mental and physical events; he then recalls an earlier hypothesis suggested by Eddington concerning a possible correlated behaviour of individual particles of matter in liaison with mind.

It is clear that much more research must be done before the problem of the mind-body relationship is solved, but there is now a marked change of view developing among both neuro-physiologists and psychologists. I have already referred to Professor Sir Cyril Burt's

¹Psycho-kinesis is the name given to an effect which it is claimed has been demonstrated by experiments first made by Professor Rhine and his colleagues at Duke University, but repeated in a number of other universities (e.g. by Dr. Thouless at Cambridge). It appears from their experiments that some minds can produce slight effects upon moving objects such as dice, effects which are only revealed by the statistical analysis of long series of tests. I have not referred to their experiments in my lecture on psychical research because I regard them as, so far, less well established than others; I do not deny their importance, but for reasons indicated in one of my former lectures (*The Living Stream*, pp. 241-2) I think it just possible that they may be demonstrating some phenomenon of nature other than the supposed psycho-kinetic one. As I have already indicated I fully expect that in its various fields psychical research will indeed throw much more light on the nature of the mind-body relationship.

²Vol. 168, p. 53, 1951.

demonstration by statistical psychological methods that values can be studied scientifically as objective realities (p. 125); he has recently in two important papers, "The Structure of the Mind"¹ and "The Concept of Consciousness"², shown the absurdity of both the epiphenomenal view of mind and the old behaviourist³ type of psychology. I will quote just one short extract from each. From the former I take the following:

In the past most psychologists took it for granted that one conscious process determined another. But, as Professor Mace has pointed out, few have turned this ostensible fact into an explanatory principle; "Freud seems to have been almost the first to take *mental* determinism seriously as a basic explanation in psychology."

It is perhaps here more than anywhere else that we come up against the most conspicuous inconsistency in the epiphenomenalist's position. He relies on conscious reasoning to prove his doctrine; and yet the very doctrine that he seeks to prove denies that conscious reasoning has any intrinsic validity. By his own showing the sole grounds for his utterances must be certain purely mechanical processes that have occurred within his brain: all else is illusion. And thus, as Stout observes, "materialism, in undermining common sense, undermines itself".

And from the latter:

I conclude then that behaviourism, both in its original or "naïve" form and in its later or "sophisticated" forms (to use Boring's convenient labels), has proved untenable. As a principle of methodology—particularly in certain specialized fields, such as animal psychology—the behaviourist approach has suggested useful experimental techniques and produced valuable results; but as a basis for a general theory of human experience it is hopelessly inadequate. The need to reintroduce the concept of consciousness seems inescapable. It is quite untrue to declare, as Watson does, that the introspectionist "never tells us what consciousness is, but merely puts things into it by assumption". The phenomena of consciousness are not doctrinal assumptions; they are undeniable facts which everyone can verify. In its most conspicuous form—that of direct awareness—consciousness

¹*The British Journal of Statistical Psychology*, vol. 14, pp. 145-70, 1961.

²*British Journal of Psychology*, vol. 53, pp. 239-42, 1962.

³Not to be confused with the modern animal behaviour studies, see p. 160.

is a unique relation; it constitutes the basis of all observation, including the observations of the behaviourist himself. And the immediate objects of this awareness—the so-called “contents” of consciousness—are the things we know with the highest degree of certitude.

The shallow materialism of those biologists and psychologists who imagine that, in reducing all life to physics and chemistry, they are taking the only truly scientific course, is now giving way to a wider vision. There are still those, however, who seem to imagine that the principle of Occam’s razor demands that they should take the mechanistic view. This excellent principle, that of economy of thought, is certainly a valuable guide in general procedure, but *not* if it makes us miss the truth in straining after an entirely false over-simplification. Civilization may yet cut its throat with Occam’s razor if it does not realize in time that materialism is ignoring a large part of the data of experience.

This is just one reason why I believe it is so important to push on with psychical research to gain much stronger evidence for extra-sensory perception. Similarly with research into the process of hypnosis—here surely is a field in which the nature of the mind-body relationship can be examined by the experimental method. As Lord Brain has emphasized most of our knowledge of this relationship has hitherto been based upon perceptions which depend upon the physical structure of the sense organs and the nervous system.

It is however in relation to religion and a natural theology that I believe a greater knowledge of extra-sensory perception will be so important. If it can be generally accepted that individual minds may be in touch with one another through channels other than those of the normal bodily senses, this should give back a reasonable faith in the possibility of communication with something beyond the self to those who have lost it on false materialistic grounds.

We must expect the discoveries of science to bring about many more drastic changes in our views as to the nature of the universe. Astronomy has altered our whole conception of the heavens and our position in it, physics has revolutionised our knowledge of matter and biology given us a new view of our relation to the animal kingdom; each step brings us a better understanding of our being. We must not be surprised if psychology is changing our thoughts about God. Theology, still based upon the thoughts of men of more than a thousand years ago, is unlikely to remain what it was; part of it, a large part

of it, may well be as much in error as was the optical illusion of the sun going round the earth.

Talking of this illusion of the sun going round the earth: how different the universe might appear to us if we lived in another part of it, perhaps upon an earth that was neither rotating nor going round a sun, so that we would have no night or day, and no seasons. It might be much later in our history before we had clocks or any means of measuring time. In the old days the natives on the island of Annobon in the Gulf of Guinea, almost on the equator, had no seasons and no means of measuring the passing years; yet they elected their chiefs to reign for certain periods. Ships only very rarely called at this remote island and such visits were great events; they measured the periods of the chief's reign to be that marked by every tenth ship that called, so that he reigned for a ten-ship period—sometimes shorter—sometimes longer. Without periods of night and day—without seasons—we might only have a vague feeling of duration—of continuing. We have no sense organs for the direct appreciation of time. Is it not a little strange that our sense organs give us excellent perception of three dimensions, those of space, but not of the fourth, of time? It should indeed remind us that our physical system is *not* showing us all the universe. We make clocks which are instruments based of course, like calendars, upon the movements of the heavenly bodies to so give us continual visual impressions of the passing of time; similarly we have to make other instruments which show us electrical changes that our bodily sense organs themselves will not record for us. If it had not been for the chance existence of loadstones we might never have known about magnetic fields. It is true that we now realize that we ourselves, and many other animals, have internal physiological clocks built into our systems. but these are metabolic (physico-chemical) rhythms evolved, like our clocks, in relation to external diurnal changes in the environment.

Without night and day, and seasons, we might, if clocks had not been invented, not really believe in time as a regular process of duration; sometimes it would pass for us far more quickly than it would seem to pass for others, and we should be for ever disputing that there could be such a regular process and we might express the view that those who believed in its existence as a universal character were cranks and charlatans. And for that matter do we now really understand the nature of time? Could the religious sense—the sense of the Holy—the feeling of the sacred—the something we call God—be something

as fundamental as time but, like love, be unperceived directly by our senses; and like love—indeed linked with it—felt by our conscious ego in an extra-sensory way. As our natural history of religion brings together the records of religious experience and slowly, through classification and a relation to psychology, merges into our future science of theology, it will begin to show us more of the nature of the divine flame in man which responds to what we call divinity in the universe.

It would be folly to speculate and pretend at this stage that we have any idea as to the true nature of this power. All I would say at the end of my former course of lectures was this:

Our Natural Theology must be fearless. We must have the scientific approach and not shrink from what it may point to. At the *very least* I expect this power of which we speak may be some subconscious shared reservoir of spiritual "know-how" which we call Divine (perhaps the speculative species "mind" that I have suggested); I think, however, that above this there is something much more wonderful to which we give the name God.

Professor W. H. Thorpe, in his Freemantle Lectures¹ which I heard him deliver in Balliol College—and which have much in them relating to my theme—quoted a remarkable passage from an essay by the late Professor J. B. S. Haldane in his *The Inequality of Man* (1932); I requote it here to show that he had a similar idea and that it need not be considered too heretical from a biological standpoint:

Now if the co-operation of some thousands of millions of cells in our brain can produce our consciousness, the idea becomes vastly more plausible that the co-operation of humanity, or some sections of it, may determine what Comte called the Great Being. Just as, according to the teachings of physiology, the unity of the body is not due to a soul superadded to the life of the cells, so the superhuman, if it existed, would be nothing external to man, or even existing apart from human co-operation. But to my mind the teaching of science is very emphatic that such a Great Being may be a fact as real as the individual human consciousness, although, of course, there is no positive scientific evidence for the existence of such a being. And it seems to me that everywhere ethical experience testifies to a super-individual reality of some kind. The good life, if not necessarily self-denial,

¹Now published as *Science, Man and Morals*, Methuen, 1965.

is always self-transcendence. This idea is, of course, immanent in the highest religions, but the objects of religious worship retain the characteristics of nature-gods or deified human individuals. It was more satisfactorily expressed by Comte; but there is much in Positivism as originally conceived by him which seems unnecessarily arbitrary.

But to return to my own statement made at the end of my former course, it would indeed be presumptuous to try to say more than this now; it is for our natural theology of the future to tell us more. Nevertheless I believe that the various fields from which I have drawn evidence in the present set of lectures have all shown us different sides of this reality; we also have been encouraged, I hope, to suppose that much more knowledge will be forthcoming and welded together as our subject develops with increased research into the various aspects of religious experience. We may, of course, never be able to understand the true nature of Divinity; but we can continually augment our evidence as to the working of its power by experimenting in our way of life. It was only after I had written this and given it in my lecture that I looked up Haldane's essay, quoted by Thorpe, and found to my surprise that in his very next paragraph (his p. 114) he talks of a scientific theology. I cannot resist quoting this as well:

Just because any formulation of the nature of such a being (i.e., the Great Being he refers to) has ultimately fallen below the best in our own moral consciousness, religions though at first a help later became a hindrance to ethical progress, and we shall do no good by premature theorizing. But just as, starting from the basis of chemistry, biochemists are gradually explaining the phenomena of life, so from a basis of psychology our descendants may build up a scientific ethics which may perhaps be at the same time a scientific theology.

In the syllabus of this course of lectures which I had to prepare for printing some months before giving this last lecture, and before I had worked it out in detail, I had suggested that I would give a fuller consideration of the experience of those with a religious temperament who feel that they definitely receive guidance in response to prayer. I was contemplating examining a number of examples of such experiences including some more of those discussed by William James and Professor Starbuck (other than those referred to in lecture iv); I have since thought it would not be very profitable to go into the details of such cases in just part of one lecture. They would require a

much fuller analysis to make a worthwhile study. It is quite clear, however, as I hope I showed in lecture iv, that there are a great many people who do feel that they get help in the solving of their problems, especially personal problems, in answer to prayer. I am not referring to petitionary prayer for the alteration of physical events, or for personal safety or freedom from illness, but prayer for guidance for a better way of life or perhaps, more specifically, how best to deal with some difficulty or to achieve some worthwhile purpose. It seems as if such appeals can draw help from some power which appears to be beyond the self. I have already quoted the views of such psychological authorities as William James, Sir Frederic Bartlett and others (pp. 104-6) to show that there is much evidence that this is really so. Our future science of theology will, I believe, give us much more evidence regarding this, and religion will become animated by a more vital and dynamic faith than one which rests mainly upon the acceptance of some dogma from the past. It will become in fact a truly *experimental faith*. This was the conviction I expressed in my Essex Hall Lecture¹ of 1951; let me give a brief extract from it:

It is within the non-material realm indicated by extra-sensory perception that I believe what we call prayer may be found to lie. . . . Can there possibly be a greater quest than the securing of evidence which will demonstrate beyond all reasonable doubt the existence of an extra-sensory world about us in which our consciousness is somehow in touch with something greater than our individual selves—some power from which we can receive strength and support? Could not the results of research perhaps reveal to others what to some is a profound conviction? If such studies showed that contact with some power beyond the self seemed a likely possibility, would not many, who had not hitherto had the faith to make the experiment, be induced now to try to reach that power in prayer? Might not many find that it worked? Might it not generate a new experimental faith?

The conception of an experimental faith is, I believe, of overwhelming importance for the future of mankind; it has been forcibly expressed by Miss Barbara Ward in her book *Faith and Freedom* (pp. 254-6) from which I now quote—she has just been discussing the success of the experimental method in science:

What is perhaps not very generally realized is that if this is the

¹*Science and the Quest for God*, The Lindsey Press, London.

full extent of science's claim to lay bare reality, religion can proceed with much the same degree of certitude. The saint can say: "This universe I tell you of, in which God's being and energy and love fill all reality and in which the base of your own soul is anchored in the Source of Being, may seem to you very far removed from the colourful material reality which you meet every day. But is it stranger than the colourless, soundless energies of science? Stranger than the notion that you are sitting this moment upon an intersection of physical impulses? Than that reality is a dance of electrons? The energy of God and the energy of nuclear power are equally remote from daily experience."

But, some will say, we can prove the existence of nuclear power by setting up immensely complicated experiments, processing matter through them and at the other end receiving a predictable explosion. "Then," the saint continues, "I say that the experiments of the religious life work in exactly the same way. We, the scientists of goodness, tell you that if you will take the raw materials of your all too human mind and body and process them through the laboratory of detachment, humility, prayer and neighbourly love, the result will be the explosion into your life of the overwhelming love and knowledge of God. Do not think you can know God except by hearsay unless you submit yourself to this experimental process, any more than you can produce nuclear fission without an Oak Ridge or a Harwell. But we promise that if the experiment is carried out under clinically pure conditions—as it has been in the life of the best and purest of mankind—then the result is scientifically certain. The pure of heart shall see God. That statement of fact is as experimentally certain as that H_2O is the constitution of water, and it is proved by the same experimental means."

If science is known by results—and this is in fact where its certitude rests—so, too, are the truths of religion. The experimental tests of religion are more delicate and unstable than those of science, for the raw material—the heart of man—has not that implicit obedience to the law of its own nature which is observable in metals or minerals or even living tissues. Inconveniently but gloriously, it has a free and unconditioned element. Again and again, in the laboratory itself, the experiment is botched. Yet where it is triumphantly concluded—in

a Buddha, in a Lao-tse, in a St. Francis of Assisi, in a St. Peter Claver or a John Woolman—the experimental proof of religion shines forth with a light no less clear than that of science.

There can, I think, be no doubt that again and again people are convinced that they do receive answers to the prayers they make for help in their problems, provided they are not selfish prayers; I am myself convinced of it—the experiment works—but I am not so sure that the answers received are quite so simple in their nature as perhaps most believers imagine. I think it possible, and I say this with all humility and diffidence, that the response that comes from such prayer may be of a dual nature. There is first the uplifting feeling of being in contact with a transcendental element beyond the self: the feeling so well described in the words of William James:

The appearance is that in this phenomenon something ideal, which in one sense is part of ourselves and in another sense is not ourselves, actually exerts an influence, raises our centre of personal energy, and produces regenerative effects unattainable in other ways.¹

It is a power that enables the individual to have more courage, to overcome obstacles and achieve the seemingly impossible. This is the greatest part of the response and one which, as James says, appears to come in part from beyond the self; but do the solutions to our particular individual problems also come to us in the same way? The answers do not usually come at once and the solution that eventually dawns upon one, is as often as not, not at all the kind of solution one expected. Is it reasonable to suppose that *all* the different individual answers of *all* who pray are really coming from one transcendental source beyond the self? Would it not seem more in keeping with what we know of nature for each of us to have our own built-in solution-provider? But one perhaps that is “unlocked” as it were by this transcendental or extra-sensory power.

This we must consider carefully for there are indeed psychological explanations for some very similar occurrences. There is what is sometimes called “intelligent dreaming” where a person may see in a dream the solution to a problem which has been occupying his mind for some time. There are well-known examples of the solving of scientific puzzles in this way. The chemist Friedrich von Kekulé tells how in a dozing dream he saw snake-like rows of atoms twisting about and then one seized its own tail; this, on waking, suggesting to him the structure of

¹*The Varieties of Religious Experience*, p. 523.

the benzene ring. Or again there was the dream of Elias Howe, the designer of an early sewing machine, who for a long time had failed to make it work because he placed the eye of his needle at its conventional blunt end; he dreamt that he was caught by some savage tribe which had spears with holes *near their points* and so awoke with the solution of his problem, perfecting his invention by placing the eye of his needle near its pointed end. We must all know how, without such dreaming, we may go to sleep thinking of some difficult problem and awaken in the morning with a solution to it. Our subconscious mind goes on working whilst we are asleep. Perhaps also the answers to our own particular difficulties which we seek in prayer are coming from a similar source? In part I think they may be, but there is more, I believe, to it than that; let us, however, first consider some allied psychological phenomena.

Freud has suggested that we may repress what seem to us to be irrational motives only to find that they may return unawares to affect our behaviour, making us perhaps miss a train or have a slight accident which prevents us keeping some appointments which we have previously thought may be disadvantageous to us. Claire and W. M. S. Russell in "*Raw Materials for a Definition of Mind*," their contribution to the book *Theories of the Mind*¹, say such incidents are by no means uncommon and present us with the following striking illustration:

Shakespeare, as usual, provides a splendid example. When Hamlet is about to leave for England with Rosencrantz and Guildenstern, he is in no doubt about their reliability and his own prospects. "There's letters seal'd; and my two school-fellows, Whom I will trust as I will adders fang'd," etc. (act III, scene iv). In the same soliloquy he even outlines a strategy—that of hoisting the engineer with his own petar. By the time he is on ship-board, he has repressed all this, and goes to his cabin to sleep. But the repressed intelligent observation is still at work. In his heart (as he tells Horatio in act v) "there was a kind of fighting that would not let me sleep . . . our indiscretion sometimes serves us well, when our deep plots do pall; and that should learn us there's a divinity that shapes our ends, rough-hew them how we will". Restless with insomnia, he has a vague impulse to look at the letter. He opens it, finds the order for his assassination, and proceeds to carry out the strategy

¹Edited by J. Scher, Free Press of Glencoe, New York and Macmillan, New York and London, 1962.

he had formed in Denmark—without remembering this at all. To him it seems like a new and strange inspiration: “ere I could make a prologue to my brains, they had begun the play,—I sat me down, devised a new commission, wrote it fair” and so on. Anyone who has noticed him—or herself having this sort of experience will recognize the perfect accuracy of the poet’s description. The “divinity” is, of course our own intelligence. This sort of behaviour is specially common in a particular class of the personality type we have called “idealistic”, to which Hamlet conforms in all other ways. The chief feature is a readiness to repress (either instantaneously or after first voicing them) accurate observations about the *hostile* intentions of others.

It may well be that the various separate solutions to our individual problems are always within us if only we could reach them, and that the act of prayer brings them to the surface. Instead of supposing that one great personal-like Deity is thinking out simultaneously the detailed answers to the millions of different problems of all the individuals of the world, is it not more reasonable to suppose that some action is set in motion by prayer which draws the particular solution for each one of us from our own subconscious minds? In saying this I must again make clear that I am not implying that I believe this destroys our conception of the Divine. All the evidence of religious experience, I believe, shows us that man makes contact with this Power which appears partly transcendent, and felt as the numinous beyond the self, and partly immanent within him. I also think it likely, however, that it may well be this uplifting power which does in fact activate the subconscious solution-providing mechanism in a way which would not otherwise be possible. In a similar way it may be the same power which assists in the healing of a sick person. As a further expression both of the reality of this sense of the Divine Power and of the experimental nature of faith let me give another quotation from L. P. Jacks; he has been discussing the perplexing mixture of lines of thought in Christianity and saying that while it does not exclude the concept of God as a moral governor of the universe it does not begin with that idea. In view of what I said at the end of the last lecture I would just remind you that Dr. Jacks was far from being an orthodox Christian; his Christianity was of a most liberal kind.

It does not require us [he says] to dismiss from our minds as blasphemous every thought of God which makes him other than the omnipotent legislator of the universe. In the religion of Jesus

I am struck by the absence, by the total absence, of all these pompous conceptions of the Divine Nature, which show such speaking signs of having originated under lawyers' wigs.

The idea that I do find seems to have originated in a very intimate and loving comradeship with man and with nature. Indeed, the religion of Jesus is precisely this spirit of comradeship raised to its highest power, the spirit which perceives itself to be "not alone", but lovingly befriended and supported, extending its intuitions to the heart of the world, to the core of reality, and finding there the fellowship, the loyalty, the powerful response, the *love*, of which the finest fellowships and loyalties of earth are the shadows and the foretaste. In its essence the Gospel is a call to make the same experiment, the experiment of comradeship, the experiment of fellowship, the experiment of trusting the heart of things, throwing self-care to the winds, in the sure and certain faith that you will not be deserted, forsaken nor betrayed, and that your ultimate interests are perfectly secure in the hands of the Great Companion. This insight, this sure and firm apprehension of a spirit at hand, swiftly responsive to any trust we have in its answering fidelity, coming our way the moment we beckon it, motionless and irresponsive till we hoist the flag of our faith and claim its fellowship, but then mighty to save—this is the centre, the kernel, the growing point of the Christian religion, which, when we have it all else is secure, and when we have it not all else is precarious. God, said Jesus, is spirit: man is spirit no less; and when the two meet in fellowship there is religion.¹

At this early stage in feeling our way from a natural history of religion towards a science of theology we must go slowly, and certainly not be dogmatic about any of these things, such as the nature of prayer and so on; we must continue to collect more evidence from personal experiences. There is something else that should be mentioned because it appears to point to quite a different mechanism in giving help in personal problems from the one suggested. There are certainly people who feel that they are not just being guided in their mental behaviour; various events in their lives appear to them to occur *as if* they were being manipulated towards some particular end. A consideration of such cases must form an important section in our natural history. Then there are those who feel they have some destiny. There

¹*Religious Perplexities*, p. 92.

are many examples in biography; I will take just one as an illustration, a quotation from C. G. Jung's *Memories, Dreams, Reflections* (p. 57):

From the beginning I had a sense of destiny, as though my life was assigned to me by fate and had to be fulfilled. This gave me an inner security, and, though I could never prove it to myself, it proved itself to me. I did not have this certainty, it had me. Nobody could rob me of the conviction that it was enjoined upon me to do what God wanted and not what I wanted. That gave me the strength to go my own way. Often I had the feeling that in all decisive matters I was no longer among men, but was alone with God. And when I was "there", where I was no longer alone, I was outside time; I belonged to the centuries; and He who then gave answer was He who had always been, who had been before my birth. He who always is was there. These talks with the "Other" were my profoundest experiences: on the one hand a bloody struggle, on the other supreme ecstasy.

Naturally, I could not talk with anyone about these things. I knew of no one to whom I might have communicated them except, possibly, my mother.

There may be a number of people who feel convinced that their lives have been so "arranged", yet would never dream of admitting it: not only because they could not bear to appear so privileged, but also that they cannot believe that they could really deserve such special treatment.

Then what are we to make of intuitions? Especially those of men of evil genius, such as Hitler? It almost looked as if, in his ascendant phase, there was some super-human power behind him, and he certainly seemed to feel it. Could it be possible that, as a part of nature, there might be, as a result of a sufficient degree of shared emotion, a kind of tribal (or racial) "spirit", either for good or evil, that can be generated by some extra-sensory means and have such a force as almost to succeed in conquest? Such speculations may be folly, but I believe our natural theology must carefully consider all kinds of hypotheses before rejecting them and not be afraid to look at some rather unpleasant things or pretend they are not there. We have seen in lecture VII how cruelty, lust and their opposite may have entered religion; there is much more in relation to evil that our science must investigate. Marett ended one of his Gifford Lectures with the following striking passage:

Thanks to the grosser forms of the sacrificial rite, the middle religions—not those of savages so much as those of the half-civilized peoples—reek of blood like a shambles. It was the sacrifice of Iphigeneia that called forth the protest of Lucretius in immortal verse: *tantum religio potuit suadere malorum*. Yet if the facts are so, let us face them fairly. If religion is liable to unloose the beast in us even while seeking to free the man, we must learn how this deviation occurs, so that religion may be kept to the true direction. As psychologists, then, we must not be content to speak together in whispers about the lust or the cruelty that found their way into the religious complex together with the noblest of the human tendencies. Let us honestly proclaim that religious emotion is ambivalent, exciting the mind at once for better and for worse. At times, then, man is apt to think that he has reached the heights when he has merely touched the lowest depths of his spiritual nature.¹

We may note that Marett wrote this before Hitler's 'religion' of Nazism had got fully under way.

A true science of theology, a branch of science that may be accepted internationally like psychology, chemistry or any other branch, cannot fail to have a great influence for peace in the world. The bitterest wars have always been those of rival religious faiths. Like the jealous Jehovah of the Hebrews, perhaps there really have been "tribal" gods which have each held their particular races together and made them mighty strong in battle; perhaps human history emerging from pre-historic evolution shows us the conflict and survival of the "fittest" races—those animated by the more powerful emotional forces that give them higher degrees of courage, dash and endurance. Perhaps just as evolution may have made man into an animal prone to believe, in the manner suggested by Waddington which we discussed in lecture II (p. 46), it may also have fostered the development of this extra-sensory group feeling of a tribal divinity. The racial gods would seem then to have largely given way before the development of wider faiths as great prophets saw new truths; the resulting new religions spread across national boundaries from different centres in the world. Then again, within these new faiths, differing doctrines have led to rival sects which may even split apart brothers and sisters; and these sects, such as Catholic and Protestant, have at times fought with as much passion and bitterness as any tribal clashes of the earlier days. No wars

¹*Faith, Hope and Charity in Primitive Religion* (p. 90) 1932.

are more bloody than those of religion; yet the same spiritual features can be seen in all the great religions of mankind. A natural theology built as strictly as a science would have elements reflecting the truer parts of all the great faiths; it should lead to an experimental faith acceptable to all the people of the world.

There is so much more, I am sure, that ought be said, about our future theological science, but I must draw to a close; before doing so, however, there is one promise that I should briefly fulfil. I was asked in one of the informal seminars, "Can anything be said about a possible purpose in the universe?" Rather than reply at once to so great a question I preferred to wait and try to say something about it in my last lecture. I think most agnostics and humanists, if asked, would say "No". Now I admit that I don't think anything *useful* can be said, because it can be nothing more than the wildest possible speculation; nevertheless perhaps it might just be worth saying that, on purely logical grounds, it is not impossible to imagine a reasonable goal for the cosmic evolutionary process. Certainly any such guess made in the twentieth century is most unlikely to be the correct one; however—and I think perhaps *this* is worth saying—the very fact that one can conceive an even remotely possible solution may save one from being in the pessimistic position of imagining that there can be *no possible purpose* in the process at all. Such a defeatist loss of all sense of meaning in the world is one of the tragic outcomes of the materialism of today.

My tentative and no doubt entirely improbable answer cannot be other than a quite fantastic flight of fancy into the realm of science fiction. Perhaps I am making a great mistake and am simply making myself ridiculous. I take the risk of this because without outlining the idea, which I agree is no doubt almost absurd, one cannot vindicate one's belief that *logically* it is not impossible to conceive of a purpose in the evolutionary process. So with this warning of what nonsense to expect, I will apologetically proceed.

We see the continually increasing rate of man's scientific and technological skill and achievements. The progress in the present century is staggering. All this great development has come about in an extraordinary short space of time and indeed the whole of man's civilization is but a few thousand years compared to the two thousand million years' span of organic evolution. Provided we have no cosmic or man-made disaster, we should, on this earth alone, still have more than a thousand million years of evolution in front of us. Consider

this acceleration of our material progress. Sixty years ago man had only just learnt to fly; he had not yet flown the English Channel. Today millions of people fly every year across the oceans of the world and the pioneers are now out in space with every prospect of reaching the moon before the present decade ends. Who can doubt that within a hundred years man will be in every part of the solar system in which he can get a footing by building elaborate, air-filled, cooled or heated capsules? There is the same progress in almost every field. Animal life can now be suspended by freezing only to start again into full vigour by appropriate thawing techniques. Man, by being drugged and put under improved techniques of suspended animation will no doubt be sent unconscious in capsules to be brought to life again in perhaps thousands of years' time when he has reached far away parts of the galaxy. With potentially some thousand million years of time in front of him, the mind boggles at the thought of what or where he might be. There is no need to enlarge on it, except in one direction, and that is in the development of computers—great exosomatic brains; see how they have increased in size and operational possibilities in just *ten* years' time. What will they be like in a *million* years' time? Machines perhaps so large that they cover whole continents, nay perhaps whole planets, with vast armies of technicians swarming like ants along their endless galleries and corridors.

So much for the physical side for which, I believe, no such picture need be an exaggeration; it is on the other side where speculation must be folly. I am optimistic enough to expect that Man's spiritual and intellectual life (if we can still call him Man!),—with a greatly extended natural theology and much progress in psychical research—will also have developed enormously. Given sufficient time and a sufficient increase in information—stored mechanically for reference far beyond the memories of individual men—it seems possible that there must logically come a point when Man has indeed asked every possible question that can be asked and has in time gained and recorded every possible answer. He will know all the secrets of the Universe. He may in addition have developed a new collective consciousness as Haldane suggested (p. 230) and a greatly increased spirituality. I am, perhaps, in my imaginary answer getting near the Omega point of Teilhard de Chardin, but by a different road. Perhaps indeed we really *are* the children of God and that evolution must, with its psychic, spiritual element operating within the material matrix, eventually lead to a collective omniscient consciousness knowing just how and where in the

universe life may and *will* be started again! We are perhaps part of a great system for generating love, joy and beauty in the universe: the highlights of existence that can only be perceived and appreciated when seen against the darker background of their opposites. You may remember that I heretically think it likely that love, joy and beauty are not only generated but *felt* (who knows?) far down in the animal world, and that man alone has come to discuss and express them in words. Yes, to imagine a purpose is not impossible; but to suppose that what we imagine is actually the real purpose would be the height of impertinence. Let us leave it at that and return to earth; we may return full of a confidence that, from what the mystics, poets and artists tell us, the real meaning of the cosmic process is something far more wonderful than anything we can possibly imagine in our present state of being.

In this lecture I have largely been discussing a future science of theology, and while referring to religious experience I have said little about real religion itself except to emphasize the importance of an experimental faith. Let me end by stressing it still further. I am convinced that with the experimental method we could have a new flowering of faith that could reshape our civilization. As I said at the end of my last course of lectures, it would, I believe, be a faith in a spiritual reality to match that of the Middle Ages, but one based not upon a belief in a miraculous interference with the course of nature but upon a greatly widened scientific outlook. By experimenting I mean putting to the test the act of prayer. Experiment to see if it works. However unlikely it may seem to one from one's rationalistic upbringing, try the experiment of really imagining that there is some element that one can make contact with beyond the conscious self. Have that amount of faith—and see. How to do it? [This was not a part of my original lecture.] At the risk of appearing a prig I will outline the method which I am quite sure will work if made in the right way; it is a very old one and you will recognize its origin.

Make the approach as if you were a child speaking to a loved Father, knowing all the time that the form of this relationship is almost certainly a psychological one based upon one's own former filial affection. The personal form of it enables one to have the emotional sense of devotion that is a necessary part of the process although again you know the reality must be something very different. The analogy, if you like, sets up the relationship with this element beyond the conscious self. Ask in all humility to receive help in trying to bring about a better state

of the world ("Thy Kingdom come, Thy will be done") and think in what ways one might oneself do something to this end. Ask to be shown how one can keep oneself in better health to play a better and more active part in the world: to ask oneself if one is abusing one's body by taking more than one's proper share of daily bread. Ask that we may realize our own faults and how to mend them, and how to forgive those who have trespassed against us. Ask that we may recognize, with thought, what are the real temptations and evils that are making our lives less worthy than they could be. If all this is done with real feeling, with devotion, I fully believe that those who do it will come to feel a new power in themselves; they will feel in touch with a *power* and a *glory* beyond themselves which can make the world a different place—a new kingdom.

These are surely the essential headings under which to pray; and they were given to the world long ago with the injunction "not to use vain repetitions as the heathen do". It is not a prayer to be rattled through in a matter of seconds, as it so often is in our cathedral services, as if it were a magic incantation. It is a spiritual exercise, a prayer to be used when one is alone: "when thou prayest, enter into thy closet, and when thou has shut the door, pray to thy Father who is in secret." It must be used slowly and with thought. The exact words of the headings are surely not important; are they not only guides to the different lines of prayer?

Prayer of this kind I believe to be essential to one's mental health, as necessary as a bath is to the body; it clears and uplifts the mind and gives one zest. If peaceful privacy cannot be obtained within one's house, there are small chapels for private prayer in most churches; there one will find a conducive atmosphere although one may theologically be far from the orthodoxy of the establishment. My heart is in the Church of England, with all its beauty and deep sense of holiness, but not my mind which is repelled by its unreal dogmatic doctrines. Just as William James has a postscript to his volume of Gifford Lectures *The Varieties of Religious Experience* to make clear his own philosophical position, so am I adding a similar one to state my theological standpoint. I am a Unitarian, but not everyone understands what it means; I was myself one (in principle) for more than twenty years before I realized it.

That great modern churchman and one time Principal of Ripon Hall, Oxford, the late Canon H. D. A. Major, D.D., preached the need for a world religion and called it Basic Christianity; the only "creed"

he laid down for membership was the use of the Lord's Prayer. He wrote as follows:

What a magnificent Prayer-Creed is the Lord's Prayer in its simplicity, profundity and universality. It could be said by Jews, Mohammedans and Theistic Buddhists. It is the most unifying religious formula in the world, and I doubt whether the Christian Church has any spiritual and moral authority to refuse membership to those who can and will say this Creed-Prayer from the heart.¹

Yes, a world religion is what is needed, one founded upon a flame of faith within the heart and reason in the mind, a reasoning based upon the findings of scientific studies in both natural theology and psychical research. As I said at the end of my last course of lectures, if only 1 per cent of the money spent upon the physical and biological sciences could be spent upon investigations of religious experience and upon psychical research, it might not be long before a new age of faith dawned upon the world. I also said, "Those who are concerned lest our civilization will change its nature under the influence of a materialistic philosophy might, I believe, do well to consider how they might encourage further research into the nature of personality in the hope of finding out more about man's spiritual side and the nature of God." Any royalties on the sale of this book will go towards a research unit of this kind which I am starting at Manchester College, Oxford, of which I am honorary President. It is the College in which, in its early days in the eighteenth century, such men as Joseph Priestley and John Dalton combined with brilliance both scientific achievement and a deep spiritual faith. If any reader is able and feels inclined to support such a venture I shall be deeply grateful for any help. At the beginning of this course I expressed my sense of urgency lest the civilization as we know it is lost; I am not suggesting that the work I am proposing will save it, but each little effort towards the discounting of materialism will help.

As the making of physical fire was one of the great milestones in the rise of man, so also I believe was his discovery of prayer as a means of kindling and fanning a flame he found within him: a flame which, like a spiritual engine, has brought him to higher and higher things. Let him not throw it away.

¹*Basic Christianity*, Blackwell, Oxford, 1944.

POSTSCRIPT

Here I am following the precedent of William James who added a postscript to his Gifford Lectures to state his general philosophical position; mine will define more concisely, than may perhaps be seen in the discourse spread through ten lectures, my theological outlook. I have just indicated at the end of the last lecture that I am a Unitarian; but there are many who do not understand what this means. The name, originally indicating that the holders of this faith did not accept the doctrine of the Trinity, suggests a narrow sect; the truth is that the tenets of the movement could not be more liberal or free from dogma. Unitarianism is based upon a progressive theology. This is well seen in the summary report of the Commission of the General Assembly of Unitarian and Free Christian Churches which was published in 1945 as Part I of *A Free Religious Faith*¹. No doubt much of what is here expressed has long been held by Unitarians since the great eviction from the Church of England just over three hundred years ago: much of it, however, has a truly modern ring. It says such things as these—"We do not base our church life on the acceptance of particular creeds," "We believe that Christians have not only the right, but the duty to be free to seek new truth wherever it may be found," or again, "We cannot regard the New Testament as a final and infallible expression of Christianity, nor as a court of final appeal." Together with this scientific outlook it is a theology ablaze with religious spirit.

Because its faith is based upon spiritual experience it has no fear. It says:

We welcome every discovery that scientists and others are making, even though they bring with them new problems, because we are confident that when these discoveries are fully

¹Published at the Lindsey Press, Essex Hall, Essex Street, London, W.C.1. I should mention that I do not accept all the views expressed in Parts II or III of the book; they are personal views to be freely discussed, just as those of individual scientists are discussed at any scientific conference.

understood they can result only in a deeper sense of awe and reverence and gratitude before the great mystery of life. We believe that religion exists that we may have life, and have it more abundantly.

That is my faith. In mind I am a Unitarian, but as I said at the end of the last lecture, my heart is in the Church of England. I go there to pray in private; I cannot, however, attend its services without feeling intellectually ashamed. I hope the day may come when special services may be held for those of a more liberal faith; I believe that many thinking Christians are really Unitarian in outlook without knowing.

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